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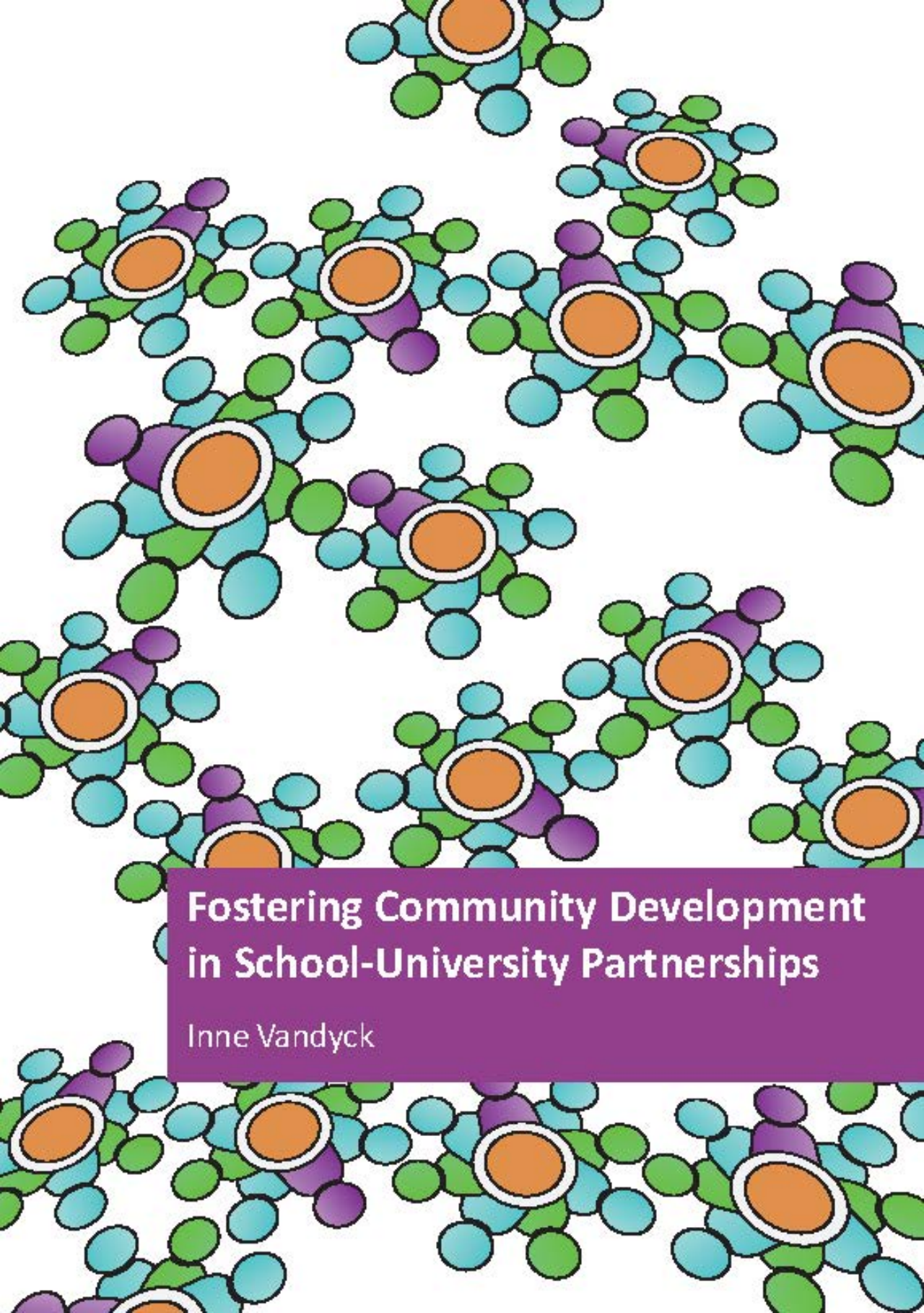

Fostering Community Development in School-University Partnerships

Inne Vandyck

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Fostering Community Development in School-University Partnerships

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Chapter 1

General introduction

1.1 Introduction

During the last few decades, teacher communities have received a lot of attention within educational policy and research. They are believed to stimulate faculty collaboration, student learning, organizational performance and innovation (Mullen & Schunk, 2010). Another recent development in several countries is the movement towards linking teacher education to (professional development) schools. In these school-university partnerships (SUPs), communities are developed to increase the knowledge about teaching and learning of all participants, to improve educational outcomes of pupils and to transform teacher preparation through structured, monitored and coordinated field experiences (Ikpeze, Broikou, Hildenbrand, & Gladstone-Brown, 2012). A mentor teacher experienced in facilitating a community of secondary school teachers and student teachers in a school-university partnership explained it as follows:

"School-university partnerships, everyone acknowledges their raison d'être. Schools and universities are searching for ways to educate student teachers together. In the Dutch context, there is relatively little known about the development and continued existence of such collaborative models. The participants of my experiment were student teachers and experienced teachers who brought formal and practical knowledge to the project. They found each other in a common goal and on a common place. The basic conditions for a community were present. In this project, as a facilitator I became aware that I have to tune the different expectations and goals. The learning process of such a group can start from different angles of incidence. In this project, I mainly fulfilled the role of pedagogical content expert, providing the group with pedagogic theory and tips. The subject of the meeting determined how I fulfilled my role as pedagogue or mentor."

This citation originates from the first mentor teacher who participated in this research and wrote a professional publication about her experiences as a mentor teacher facilitating a community of secondary school teachers and student teachers in a school-university partnership (Rentrop, 2010). This citation reflects the focus of this research: community development in school-university partnerships.

Teacher communities are often mentioned as fruitful collaborative contexts as they provide an ongoing venue for teacher learning to improve professional practice, collective capacity and continuing intellectual development (Grossman, Wineburg, & Woolworth, 2001; Little, 2003; Hammerness, Darling-Hammond, & Bransford, 2005). Many advantages of these communities are described: faculty collaboration, student learning, organizational performance and organizational innovation all benefit from the community concept in schools (Mullen & Schunk, 2010). A community is seen to foster collaboration and lifelong learning among teachers to stimulate school improvement through organizational and cultural change (Matthews, Crow, & Matthews, 2009).

To be able to participate in a teacher community, teachers need to have a certain level of community competence to collaborate with their colleagues. Therefore, preservice and in-service teacher education has a challenging role in stimulating student teachers to develop community competence. However, some authors argue that teacher education institutes do not meet this expectation. For example, Beck and Kosnik (2001) state that, despite the emphasis on collaboration in schools, teacher education often remains rather individualistic. They base their statements on the empirical studies by Lortie (1975) and Goodlad (1990), which found that student teachers perceived teaching as an individual affair and were not taught otherwise in the teacher education programme. More recently, Ruys, Van Keer and Aelterman (2010) found that teacher education institutes pay little attention to the development of community competence. In teacher education, student teachers do not prefer to collaborate during their learning process and collaborative learning is only implemented once in a while (Ruys, Van Keer & Aelterman, 2010).

In several countries, another recent development in teacher education is the movement towards linking teacher education to (professional development) schools. School-university partnerships (SUPs) focus on both the education of student teachers and the professional development of teachers (Castle, Fox, & O'Hanlan Souder, 2006; Ridley, Hurwitz, Hackett, & Miller, 2005). At this point, the variation in SUPs is high, ranging from teacher education realized as a joint responsibility of teacher education institute and school, to teacher education fully carried out by the school (Maandag, Deinum, Hofman, & Buitink, 2007). Consequently, as yet there is no consensus on how to support the learning process of both student teachers and teachers in such a partnership. In these school-university partnerships student teachers develop their community competence simultaneously in theory (the teacher education institute) and in practice (the teacher community in the school). This complicates the concept of community development and community competences when student teachers are believed to need certain competences to participate in such a community and at the same time improve their community competences by participating in that community.

In this study, the general research question guiding the exploration of community development and community competence in teacher education is formulated as:

How can community development in school-university partnerships be stimulated?

1.2 Theoretical framework

1.2.1 Trends in teacher education

Since the 1980s, teacher education has been subjected to several critiques and reforms. Teacher education programs were criticized as ineffective in preparing teachers for their work, widening the gap between theory and practice and unresponsive to the demands of modern society (Darling-Hammond, 2000). As a consequence, teaching standards have been established and professional development programs have been implemented (Tatto, 2006). Cochran-Smith (2008) speaks of the 'new' teacher education as: "it is constructed as a public policy problem, based on research and evidence, and driven by outcomes" (p.272). Changes in education emphasize (a) the preparation and assessment of new teachers, (b) teacher retention and teachers continuing professional development and (c) curriculum change and policy. In a review on teacher education articles published in *Teaching and Teacher Education* over the last ten years, Avalos (2011) found 11 recurring themes, under which teacher professional learning, school-university partnerships, teacher co-learning and workplace learning. Teacher education is no longer thought of as training student teachers with theory and methods and then sent them out to practice, nor as periodic staff development for in-service teachers (Cochran-Smith, 2011). The focus is no longer on formal teacher training, but shifted towards non-formal and informal learning throughout the teacher career. Participation in professional learning communities, communities of practice or learning networks has proved to be a major avenue for supporting lifelong professional development (Grossman, Wineburg, & Woolworth, 2001; Little, 2003; Hammerness, Darling-Hammond, & Bransford, 2005, de Laat, 2013).

The disconnection between the campus and school-based components of the education program has plagued preservice teacher education for many years (Korthagen & Kessels, 1999; Zeichner, 2010). The traditional model of the university providing the student teachers the theory, tools and competences to teach and then sending them to schools practicing this teaching has been proven to be rather ineffective and is replaced by other approaches, for example practice-based teacher education and school-university partnerships. Although the practice-based work, in which the focus lies on learning to enact core instructional practices contributes to improved classroom instruction, there is the danger that other aspects of teaching like academic

knowledge are snowed under. School-university partnerships are learning communities in which all participants (teachers, student teachers and school and university-based mentors) increase their knowledge about teaching and learning (Ikpeze et al., 2012). However, theory differs from actual practice. Differences in goals, structure and organization of university and school processes deliver some practical problems in the collaboration. Tsui and Law (2007) and Zeichner (2010) take the discussion one step further and propose to view these partnerships as a new activity system, a third hybrid space in teacher education where academic, practitioner and community knowledge come together to stimulate teacher professional development.

1.2.1 Community quality and development

Based on the concept of communities of practice (Lave & Wenger, 1991) a professional community of teachers is defined by Admiraal, Lockhorst and Van der Pol (2012) as a group of teachers who are socially interdependent, who participate together in discussion and decision making, and share and build knowledge. These activities are characterized in the community model of Admiraal. Lockhorst and Van der Pol (2012) by three dimensions:

- *group identity* is defined as the mutual engagement that binds teachers together in a social entity;
- *shared domain* is defined as a joint enterprise as understood and continually negotiated by its members;
- *shared interactional repertoire* is characterized by a shared practice and by shared beliefs on how teachers in a group interact.

These three dimensions are operationalized by nineteen indicators, as summarized in Table 1.1.

Table 1.1: Dimensions and Indicators of the Community Model of Admiraal, Lockhorst, & Van der Pol (2012)

Core feature	Indicator
Group identity	
Identification	Members identify with the group.
Multiple perspective contribution	There is room for multiple perspectives in members' contributions to the community, and members value these perspectives.
Mutual trust and responsibility	There is safety in the community to tell the truth. This means that individuals dare to take psychological risks in the community shows empathy, understanding and

Core feature	Indicator
	care.
	Members feel socially responsible for both the community and its individual members.
Social ties	The social atmosphere that members share, and friendliness in the community.
Emotional safety	The freedom experienced to share information with members.
Spiritual bond	Members find ways to embody or invoke shared guiding principles based on spirituality, ethics, and values.
Sense of collectivism	Members align with other members of the group.
Neighbourliness	Members see other members as neighbours or good acquaintances.
Co-worker support	Members are felt as significant others, i.e. to collaborate, to feel free to express their ideas and to take part in decision making.
Shared domain	
Commitment to domain	Members' commitment to the domain (subject) of the group.
Common ground	Mutual understanding on central concepts. Members feel similar understanding of concepts, use them in the same way, and are aware of possible differences in understanding. Members want to reach common ground.
Collective goal	Targets of a community are shared and are not set individually, and members are working to reach something collectively.
Shared knowledge	Shared knowledge, ideas and products are developed, used and expanded.
Shared interactional repertoire	
Intellectual building	Members build on each other during discussions and use constructive communication.
Regulation of interaction	Interaction in the group is discussed and valued.
Role taking	Members actively take up roles (tasks, positions) and accept these from each other.
Dynamic effort	The acceptance of flexible commitment of members.
Dynamic position	Boundary crossing both within community and between community and periphery is possible and

Core feature	Indicator
	accepted.
Interactional norms	Members share rules for conversation and interaction.

Additionally, three markers are defined to characterize the quality of the community processes on each of the indicators:

- *limited*: The community processes are characterized by indications of limited group identity, and some degree of shared patterns, procedures and willingness to be active in the domain.
- *moderate*: The community processes are characterized by consciousness of the group identity and development of collective activities.
- *strong*: The community processes are balanced, shared and focused on a shared domain and feelings of group identity.

In this thesis, this community perspective has been used to describe community quality and to stimulate community development in three groups of teachers and student teachers in two school-university partnerships. The combination of markers, indicators and dimensions can provide valuable insights into the quality of community processes, community development and community competence.

1.2.2 Community competence

To be able to participate in a community, teachers need to have a certain level of community competence to collaborate with their colleagues. To establish a strong professional community, Borg (2012) argues that amongst professional development opportunities and a balanced workload, teacher communities need to be given the support to develop strong collegial interpersonal relationships and training that enhances individual skills for collegiality. Additionally, teachers need to find ways to work together and negotiate professional and personal tensions and differences.

In the Netherlands, teachers are formally expected to be able to collaborate effectively with colleagues. More specifically, the 'interpersonal competence of collaborating with colleagues' prescribes four behavioural and three knowledge components. In terms of behavioural components, the teacher is supposed to share with and use knowledge from colleagues relevant for his/her teaching, to make constructive contributions to different forms of consultation and cooperation at school, to give and receive peer consultation and peer feedback and to collaborate with colleagues to develop and improve the school. To do this, the teacher needs four knowledge components: (1) the teacher has to be familiar with methods and practical terms for collabo-

ration and peer feedback, (2) (s)he has to be familiar with student tracking systems and ways of accessible administration, (3) the teacher has to have knowledge of organisation and governance of schools and (4) (s)he has to be familiar with models and methodologies to improve educational quality and school development (Stichting Beroepskwaliteit Leraren, 2004). This profile of teacher competences has recently been redefined (Voorstel Herijking Bekwaamheidseisen Leraren, 2012). A distinction has been introduced between the *core* of teachers' professional competences (content knowledge and skills, pedagogical knowledge and skills, pedagogical content knowledge and skills) and the *broad professional base* of teachers (organisation skills, communicating, planning, reflection skills, research skills, result-oriented working, and collaboration skills). Although the conceptual difference between the core and the broad professional base remains unclear, it is assumed that Dutch teachers are still expected to be able to cooperate and collaborate in their professional community.

Main (2010) studied four teaching teams from three middle schools and defined a list of skills and traits necessary for teachers to effectively negotiate the various tasks in a teaching team at a school. Main (2010) also found that training in team practices and an understanding of how to implement effective team practices and processes could facilitate team practices. However, some authors argue that teacher education programs do not provide such training. Timoštšuk and Ugaste (2010) found that teacher education is rather individualistic. Ruys, Van Keer, and Aelterman (2010) found that student teachers collaborated only occasionally. Main (2010) found in her research that student teachers often collaborate in group work but that the focus of the teacher education program was on the quality of the end product or task completion but not on the process or skills of the collaboration. As student teachers reach certification, there is the implied expectation that student teachers have learned team skills through experiential learning and are able to transfer these skills to a work setting.

With the establishment of school-university partnerships, teacher education can pay more attention towards the training of community competences, as student teachers develop these competences simultaneously in theory and in practice.

1.2.3 School-university partnerships

School-university partnerships between schools and teacher education institutes are rooted in 1980s with the emerging of professional development schools (Holmes Group, 1986). Originally, they were focused on the following four goals: (a) effectively preparing new teachers and consequently improving teacher education; (b) engaging in meaningful professional development activities for practicing teachers; (c) maximizing pupil learning and achievement and (d) conducting research on practice with the

purpose to improve pupil achievement (Castle, Fox & O'Hanlan Souder, 2006; Ridley, Hurwitz, Hackett & Miller, 2005).

Thirty years after the introduction of professional development schools, the variety in school-university partnerships (SUPs) has increased, with SUPs differing in structures, goals and contexts. Both Callahan and Martin (2007) and Maandag, Deinum, Hofman, and Buitink (2007) provided a typology of SUPs, based on characteristics like nature of participation, mode of learning, nature of decision-making and the nature of change patterns. This variety makes it difficult to develop insights into the collaboration process within these SUPs. Additionally, most literature on collaboration within SUPs has focused on the macro-level: the relationship between the school and the university in which the partnership is studied as a community of teachers, student teachers, pupils, management, parents, teacher educators, university staff, and other stakeholders. Research in this area is concerned with the development of the partnership and focuses on variables as roles and responsibilities (e.g., Grossman, 1994), common goals (e.g., Kochan & Kunkel, 1998), prior history (e.g., Lefever-Davis, Johnson, & Pearman, 2007), different cultures (Goodlad, 1993), and other variables supporting or hindering the effectiveness of a school-university partnership. Less is known about the collaboration within the teams, at the micro-level of the community in the school in which student teachers, teachers, and teacher educators participate on a daily basis. Literature on SUPs also using the micro-level of the group as a unit of analysis focuses mainly on variables like the learning process of the student teachers (e.g., Buitink, 2009), the activities of the teacher educator (Van Velzen & Volman, 2009), and identity construction (Trent & Lim, 2010). This thesis focused on the micro-level of the community, in which the interaction between participants was studied and community quality was stimulated.

1.3 This thesis

The general aim of this thesis was to study the process of community quality and development in teacher education, and more specifically in school-university partnerships. Insights gained in this study were intended to contribute to the development of powerful communities of secondary school teachers and student teachers. In order to achieve this aim, four studies were conducted in three teacher education institutes (chapter 2) and two school-university partnerships (chapter 3, 4, and 5). This thesis starts with an exploration into the state-of-the-art in the Netherlands of teacher education aimed at the development of community competence. Additionally, a design-based research was carried out to develop design principles to stimulate community quality and development in communities of student teachers and teachers in a school-

university partnership. The general research question guiding this research is formulated as:

How can we stimulate community development in school-university partnerships?

To find an answer on the general research question how to stimulate community development in school-university partnerships, we defined the following sub questions:

- To what extent do the teacher education curricula in three teacher education institutes in the Netherlands pay attention to and aim to stimulate the development of community competence?
- Which design principles contribute to the development of communities of student teachers, teachers and supervisors in a school-university partnership?
- Which design principles contribute to community development of student teachers in school-institute partnerships in either reflection meetings or thematic meetings?
- How are transformational and transactional leadership activities related to the quality of a community in a school-university partnership?

1.4 Outline of the study

The structure of this thesis is displayed in Figure 1.1.

1.4.1 Study 1: Teacher collaboration in three teacher education programs

The three teacher education institutes investigated in Chapter 2 are among the largest postgraduate teacher education institutes in the Netherlands and each offers teacher education in approximately 15 different school subjects. In all three institutes, the programmes start with an introduction week in which student teachers are assessed, in which they formulate their own personal development plan, are oriented towards the teaching profession and get to know each other. After this introduction period, student teachers participate in four different groups: mentor groups, subject matter groups, reflection groups and research groups. The development of the student teacher throughout teacher education is assessed by means of an electronic portfolio written by the student teacher and a final assessment by the teacher educator and the school mentor. In the portfolio, the student teachers have to provide descriptions of and evidence for their growing teacher competences.

This study was focused on the current state-of-the-art concerning the extent to which in the Netherlands postgraduate teacher educations aims at and succeeds in

developing collaboration and community competences of student teachers. The research question of this study was: *To what extent do the teacher education curricula in three teacher education institutes in the Netherlands pay attention to and aim to stimulate the development of community competence?* The activities of the teacher education institutes were investigated at three levels of the curriculum: the intended, implemented and attained curriculum (Van den Akker, 1998). Interviews with student teachers, teacher educators and heads of departments, observations of student groups and document analysis of study guides, portfolios and the electronic environment were used to give insight into the activities at the three curricula levels.

1.4.2 Study 2: A school-university partnership to stimulate community development

In Chapter 3, a school-university partnership (SUP) is studied which was part of one of the three postgraduate teacher education institutes described in Chapter 2. The SUP had its origin in the academic year prior to the start of the research. The teacher educator at the university was at the same time a teacher of French Language at the particular secondary school. In cooperation with another teacher of French Language, she developed lesson series to activate pupils in French classes. Other language teachers were interested in their work and wanted to join the collaboration. At that point, the management of the university and the school wanted to involve student teachers to maximize the effect of the collaboration. The community consisted of two teachers, four student teachers and one mentor teacher. They worked together to improve the pedagogy of modern language education and to develop lesson series, characterized by active learning situations.

In this study, the group of student teachers, teachers and a mentor teacher was followed for over a period of one school year. The focus of this research was to stimulate community quality and development. The research question of this study was: *Which design principles* contribute *to the development of communities of student teachers, teachers and supervisors in a school-university partnership?* Based on the Learning Together model of Johnson and Johnson (1998), design principles were developed and implemented by the teacher educator. The effect of these design principles on community development was investigated through observations. Five design principles were found to be important. The role of the leader and the task at hand seemed to be the most important factors.

1.4.3 Study 3: the relationship between design principles and course aims

In Chapter 4 and 5, a school-university partnership between a teacher education institute, located in a university of applied science, and four secondary schools was investi-

gated. The teacher education institute hosts programs for both primary school teachers and secondary school teachers. Within the broader school-university partnership, two communities were studied, consisting of secondary school student teachers and one mentor teacher. This school-university partnership was formally established in 2008 and focused on the education of student teachers.

Chapter 4 focuses on the role of the course aim on its effect on community quality. In the SUP under investigation, the community shifted in course aims from week to week; one week focusing on thematic discussions, the other week on reflection. This study focused on the relationship between course aim and the development of community quality. The research question was: *Which design principles contribute to community development of student teachers in school-university partnerships in either reflection meetings or thematic meetings?* Design principles, which were found to be effective in the previous study, described in Chapter 3, were implemented to stimulate community development. Community quality was analysed by observations of four reflection and thematic meetings of the group. Community quality was related to the implementation of the design principles to measure the effect of the design principles.

1.4.4 Study 4: Transactional and transformational leadership in teacher communities in school-university partnerships

In Chapter 5, the role of the chairperson was further elaborated. In community development, it is believed that distributed leadership can help foster the community. In this study, we examined the way transformational and transactional leadership styles can stimulate community development throughout the process of distributed leadership. The research question was: *How are transformational and transactional leadership activities related to the quality of a community in a school-university partnership?* Activities of two mentor teachers were studied on their level of transformational or transactional leadership at both macro and micro level, using observations of the group meetings. Community quality and development was analysed using the community model of Admiraal, Lockhorst, and Van der Pol (2012) through observations of group meetings.

Chapter 6 presents the general conclusions and discussion of the thesis. Methods, limitations, and implications for theory and practice are discussed.

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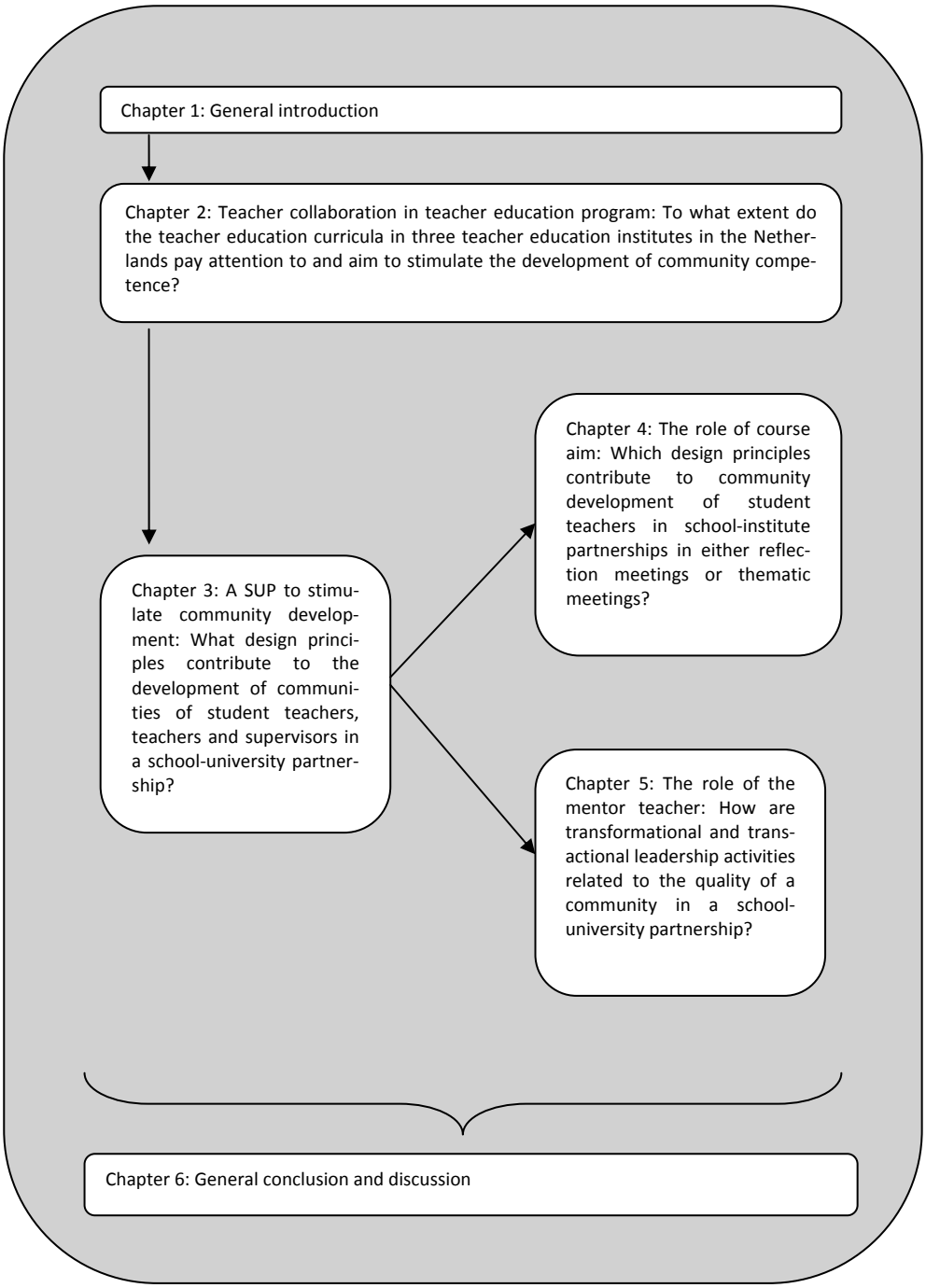

Figure 1.1: Outline of the thesis

Chapter 2

The development of community competence in the teacher education curriculum[1]

Teachers are expected to frequently collaborate within teacher communities in schools. This requires teacher education to prepare student teachers by developing the necessary community competence. The present study empirically investigates the extent to which teacher education programmes pay attention to and aim to stimulate the development of community competence in the intended curriculum, the implemented curriculum and the attained curriculum. Various types of data are gathered and analysed in respect of these three curriculum representations.
It appears that community competence is weakly conceptualised in the intended curriculum. In the implemented, and especially the attained curriculum, this results in no systematic and explicit practice in terms of the development of community competence.

1 Dobber, M., Vandyck, I., Akkerman, S., Graaff, R. de, Beishuizen, J., Pilot, A., Verloop, N., et al. (2012). The development of community competence in the teacher education curriculum. *European Journal of Teacher Education*. doi:10.1080/02619768.2012.718326

2.1 Introduction

It is increasingly emphasised that teachers, in addition to their classroom-related work, are expected to collaborate with colleagues within schools (Stoll et al., 2006).In the legislation of many countries (for example, for Australia, see Johnson, 2003, and, for the USA, see Anderson, 1998), collaboration is described as one of the key aspects of the teaching profession. Also, in the Netherlands teachers are formally expected to be able to collaborate effectively with colleagues. More specifically, the 'interpersonal competence in collaborating with colleagues' prescribes four behavioural and three knowledge components. In terms of behavioural components, the teacher is supposed to share and use knowledge from colleagues relevant for his/her teaching, to make constructive contributions to different forms of consultation and cooperation at school, to give and receive peer consultation and peer feedback and to collaborate with colleagues to develop and improve the school. To do this, the teacher needs four knowledge components: (1) the teacher has to be familiar with methods and practical terms for collaboration and peer feedback, (2) (s)he has to be familiar with student tracking systems and ways of accessible administration, (3) the teacher has to have knowledge of organisation and governance of schools and (4) (s)he has to be familiar with models and methodologies to improve educational quality and school development (Stichting Beroepskwaliteit Leraren, 2004).

This demand for more collaboration in Dutch schools is also reflected in international educational and organisational literature, where it is argued that collaboration can contribute to personal as well as organisational development. The construct of communities of practice has been suggested as a way to overcome the separation between personal and organisational development, as it brings together both the social structure within institutions and experiences of everyday existence and interpersonal events (Cobb et al., 2003). In the context of schools, teacher communities are often mentioned as fruitful collaborative contexts as they provide an ongoing venue for teacher learning to improve professional practice, collective capacity and continuing intellectual development (Grossman, Wineburg, & Woolworth, 2001; Little, 2003; Hammerness, Darling-Hammond, & Bransford, 2005). Hence, it is argued that teacher communities help teachers to 'develop a vision for their practice; a set of understandings about teaching, learning, and children; dispositions about how to use this knowledge; practices that allow them to act on their intentions and beliefs; and tools that support their efforts' (Hammerness, Darling-Hammond & Bransford, 2005, 385–6).

Although the effect of participating in communities on the teaching performance of teachers or the learning process of pupils is not straightforward, it is obvious that contemporary teaching practice demands collaborative teachers with sufficient community competence. Hence, it is important that teacher education at least partially focuses on the development of the community competence that student teachers need in order to collaborate with colleagues and to participate in teacher communities in schools. Some authors argue that teacher education institutes do not meet this expectation. For example, Beck and Kosnik (2001) state that, despite the emphasis on collaboration in schools, teacher education often remains rather individualistic. They base their statements on the empirical studies by Lortie (1975) and Goodlad (1990), which found that student teachers perceived teaching as an individual affair and were not taught otherwise in the teacher education programme. In spite of the movement towards linking teacher education to (professional development) schools in several countries, including the Netherlands (Maandag et al., 2007), it has been suggested that the situation has not changed significantly since the studies of Lortie and Goodlad. In designing teacher education, Tom (1997), Whitford and Metcalf-Turner (1999) and Timoštšuk and Ugaste (2010) claim that we still largely ignore the social dimension of teaching and the value of community development.

In the present study, we empirically investigated these claims by considering the extent to which teacher education programmes pay attention to and aim to stimulate the development of community competence. Derived from a definition of social competence in the context of communities by Admiraal et al. (2007, p. 64), we defined the community competence of a teacher as 'the ability to establish, maintain and develop relationships with other professionals, to contribute to a professional learning and working culture in the school'. Student teachers may have achieved a certain level of community competence from previous experiences in their academic, professional and social life (e.g. during their master's study at university or a secondary job) but most of them will not have had many experiences within the context of teacher communities. Consequently, we consider teacher education to play an important role in preparing student teachers for successfully functioning within the teacher communities they will come across at school. This means that student teachers have to learn how to collaborate as well as to reflect upon this collaboration. Therefore, we may expect that teacher education not only acknowledges the importance of community competence, but also actively organises activities to stimulate the development of community competence, including reflection on this development and suitable assessment procedures.

We report on a study into the current state of the art in three teacher education institutes in the Netherlands, which represent the practices within the Dutch postgraduate teacher education curriculum. Although the Dutch government has prescribed the community competence in behavioural and knowledge components, the

individual teacher education institutes are responsible for the way in which these competences are addressed and implemented in their programme. As such, the educational policy for teacher education in the Netherlands differs from some other northern European countries where the impact of governmental interference is stronger and more profound than in the Dutch system, in which to a large extent, the 'content and shape of programmes (and the accompanying innovations) are the responsibility of the teacher education institutes' (Swennen, Volman, & van Essen, 2008, p. 174). Therefore, this study provides an interesting context to investigate the way teacher education institutes give shape to the development of community competence within their programmes.

To explore the extent to which teacher education pays attention to and aims to stimulate community-competence development we considered three different representations of the curriculum, as distinguished by Van den Akker (1998, based on Goodlad 1994; also see McKenney, Nieveen, & Van den Akker, 2006). These representations are the intended curriculum, the implemented curriculum and the attained curriculum. The intended curriculum describes the original vision, basic philosophy, rationale, mission and intentions underlying the curriculum, which can be elaborated in a curriculum document. The implemented curriculum is concerned with the learning process from the point of view of the teacher – both the teachers' interpretations of what the intended curriculum implies and the instructional process in the classroom are part of this curriculum. Finally, the attained curriculum is concerned with the learning process from the point of view of the learners – it refers to the actual learning experiences and outcomes of the students (Van den Akker, 1998; McKenney, Nieveen, & Van den Akker, 2006). When attention is given to a certain type of competence on all three of these levels, we expect this competence to be better conceptualised within the programme and, as such, to be more deeply embedded into the programme.

Van den Akker's (1998) framework provides an opportunity to present a more detailed view of the extent to which the development of community competence is stimulated in teacher education. Therefore, it is possible to detect to what extent the statement that teacher education institutes are inclined to be individualistic is true for the three Dutch teacher education programmes under investigation. First, the methodology used in this study is described. Then, we present the results, describing how the development of community competence is embedded at the three curriculum levels. Finally, our conclusions are presented, based on our overview of the combination of the three curriculum levels, and we discuss the implications of these findings for the teacher education programme. The research question central to this study was the following: *To what extent do the teacher education curricula in three teacher education institutes in the Netherlands pay attention to and aim to stimulate the development of community competence?*

2.2 Method

2.2.1 Setting

This exploratory study took place in three postgraduate teacher education institutes in the Netherlands. In the Dutch context, students enrolling in such programmes have already obtained a master's degree in a relevant school subject. The programmes consist of a one-year teacher education course, during which half of the week is spent at school and the other half is dedicated to institute-related activities. Each student teacher has an internship or a paid job at a school – they are involved in actual classroom teaching, class observation and classroom-related research. During this internship or job, students are supervised by a mentor in the school. The internship gradually shifts from students observing other teachers to handling classes independently. There are great differences between teacher education institutes and schools in the Netherlands with respect to the design of the partnerships between school and university (Maandag et al., 2007; Van Velzen & Volman, 2009). As we have already pointed out, since government influence on the teacher education curriculum in the Netherlands is less strong than in some other North European countries (Swennen, Volman, and & Essen, 2008), institutes have some freedom in designing their curriculum. This study concerns the way community competence is embedded in the curriculum of the teacher education institutes, which means that we did not study the activities student teachers undertook at their school. We did take these activities into account when student teachers reported on them in their portfolios.

The three teacher education institutes investigated in this study are among the largest in the Netherlands and each offers teacher education in approximately 15 different school subjects. In all three institutes, the programmes start with an introduction week in which the student teachers are assessed, formulate their own personal development plan, are oriented towards the teaching profession and get to know each other. After this introduction period, student teachers take part in different kinds of groups in different configurations. All student teachers are enrolled in four different groups: mentor groups, subject matter groups, reflection groups and research groups. In the mentor groups, student teachers work on their personal development as teachers, in the subject matter groups they learn the specifics of teaching their own subject (e.g. biology), in the reflection groups they reflect on their experiences of school-related activities and in the research groups they carry out a small-scale educational research project. The development of the student teacher throughout teacher education is assessed by means of an electronic portfolio written by the student teacher and a final assessment by the teacher educator and the school mentor. In the portfolio, the

student teachers have to provide descriptions of and evidence for their growing teacher competences.

2.2.2 Data

We selected the three teacher education institutes on the basis of their involvement in university-based postgraduate teacher education and on their size. These institutes each enrol 100 to 200 student teachers per year. To consider the different curriculum representations and reach triangulation (Miles & Huberman, 1994), we gathered various types of data. Table 2.1 shows which data sources are related to the different curriculum representations of Van den Akker (1998). Our definition of community competence is: 'the ability to establish, maintain and develop relationships with other professionals, to contribute to a professional learning and working culture in the school'. In order to study how community competence is developed in teacher education, we decided to focus on these relationships in terms of collaboration with other student teachers as well as colleagues. We did so because we assume that different kinds of collaboration can be helpful in developing different aspects of community competence. We studied the opportunities the programmes offered to stimulate the development of community competence by collecting information on the arrangement of collaboration. Using the concept of collaboration facilitated the conversations with the interviewees because the (student) teachers were more familiar with the concepts of collaboration, collaborative activities and collaborative competence than they were with the concept of community (competence). Additionally, the arrangement of collaboration within the different programmes is seen as the context in which community competence can be used and learned. We think that this way of approaching this concept allows us to thoroughly investigate the whole curriculum, instead of searching for pre-defined activities. The national standards give direction to what a teacher who has community competence does, but not in terms of how teacher education can prepare them for that, which is the focus of our study.

Table 2.1: Overview of Data Sources Related to Curriculum Levels and Institutes

Curriculum representations (Van den Akker, 1998)	3 study guides	Interviews with 3 heads of department	Interviews with 13 teacher educators	Interviews with 9 student teachers	Portfolios of 46 students	Observation of 7 groups	3electronic learning environments
Intended curriculum	x	x	x				
Implemented			x			x	x

Curriculum representations (Van den Akker, 1998)	3 study guides	Interviews with 3 heads of department	Interviews with 13 teacher educators	Interviews with 9 student teachers	Portfolios of 46 students	Observation of 7 groups	3electronic learning environments
curriculum							
Attained curriculum				x	x		
Institutes:							
Institute 1	1	1	7	6	14	5	1
Institute 2	1	1	2	2	10	2	1
Institute 3	1	1	4	1	22	0	1

The study guides of the three institutes were analysed to gain insight into the formal programme of each institute. The guides present the vision and mission of the teacher education institutes, which are potentially related to the development of community competence. Interviews with the department heads of all three institutes were also conducted as a source of insight into the intended curriculum. They answered generic questions about the visions and missions regarding the development of community competence. Similarly, interviews with teacher educators were conducted as a source of information on both the intended and the implemented curriculum. Regarding the intended curriculum, teacher educators talked about their vision on the development of community competence. Regarding the implemented curriculum, the teacher educators explained their perceptions of the curriculum and, specifically, about whether and how they embedded the development of community competence in their teaching practice. We selected 13 teacher educators from the three different institutes, as that number offered us the possibility to include teacher educators responsible for all types of groups and from different subjects in order to obtain an overall view. Interviews with student teachers were held to enable us to describe the attained curriculum. They talked about possible learning processes concerning the development of their community competence. We selected nine student teachers from different subjects, by which all institutes were represented. They were in the final phase of their education so that they could reflect on the whole study year and all types of groups in which they participated, and were willing and able to give a complete description of the kinds of activities undertaken during the programme. All interviews were semi-structured and mainly focused on the extent to which the development of community competence was deemed important and how it was implemented in the curriculum. The interviews were the primary source of evidence in this study,

combined with study guides, portfolios, observations and digital environments in order to have a complete overview of the way teacher education stimulates community competence development. The statements of the interviewees will be used in this article to exemplify the results of our study.

We randomly selected the portfolios of 46 student teachers to represent the learning outcomes in community competence, again of different institutes and different subjects. This relatively large number of portfolios gave us the chance to verify the data of the interviews with a larger group of student teachers. Different types of groups were observed to gain insight into the implemented curriculum. As there were no formalised research group meetings at the time we conducted this study, we were not able to observe these groups. We were also unable to attend the groups at one of the institutes. We included a total of seven groups in order to get an overview of all types of groups available at the time. Additionally, the logs of the electronic learning environments (ELEs) of each of the different types of groups were collected to examine the process of the development of community competence taking place digitally.

2.2.3. Data analysis

The three curriculum representations of Van den Akker (1998) were used to analyse the different data. We used Atlas.ti (Scientific Software Development GmbH, Berlin, Germany) for the analysis of the interviews. The derived analytic scheme, which will be further elaborated upon in the next paragraphs, was used by the first two authors to code all interviews during several rounds until full agreement was reached. The other data sources were analysed separately by the two first authors.

To determine the aim of the *intended curriculum*, we reviewed the study guides and analysed the data from the interviews with the teacher educators and the heads of department. In the study guides, we scrutinised all texts to search for references to (the development of) community competence. We included all sentences referring to the development of community competence in the mission/vision statement, the learning aims, the course descriptions and the assessment procedure. From the interviews, we used those parts in which the interviewees described what they considered to be the ideal way to educate student teachers in community competence. A distinction was made between their views on the importance of community competence for the profession and their views on the role of teacher education institutes.

The *implemented curriculum* was analysed on the basis of interviews with teacher educators, group observations and the logs of the ELEs used by groups. As mentioned before, we may expect teacher educators not only to recognise the importance of community competence, but we also expect them to stimulate community competence development by organising collaborative activities, including activities focusing

on reflection on and assessment of community competence development. Therefore, during our analysis we searched within the interviews for teacher educators' comments about the way they stimulate community competence and categorised these statements into the three main categories: collaborative activities, reflection and assessment. The collaborative activities are configured within different group arrangements: mentor groups, subject matter groups, reflection groups and research groups. The activities within these types of groups, together with reflection and assessment, have an important role in the curriculum. Student teachers present their reflections in electronic portfolios, which are used by the teacher educators as a basis for assessment. Comments about the ELE were also considered, as this turned out to be a means of teaching in addition to face-to-face meetings. In analysing the observations, we focused on if and how collaborative activities were performed. The discourse in the ELEs was analysed in two phases. First, we determined what kinds of activity were visible in the environments. Next, the environment was searched for evidence of collaboration. Evidence of collaboration was defined as the following: (1) when a student reported a collaborative activity with a colleague or fellow student, which occurred face-to-face or in the ELE, or (2) when two or more students were engaged in a discussion about an experience, a problem, or a product.

The *attained curriculum* was analysed on the basis of interviews with the student teachers and their electronic portfolios. We looked at those parts of the interviews in which student teachers explicitly talked about their experiences of the curriculum in relation to the development of community competence. Also in this case, the statements of the student teachers were analysed and categorised on the three main categories: collaborative activities, reflection and assessment. The portfolios were searched for instances of student teachers describing a learning experience concerning community competence.

2.3 Results

2.3.1. Intended curriculum

To give an indication of the institute's intentions towards embedding the development of community competence within the curriculum, we give an overview of the visions and mission of the teacher education programme, the heads of department and teacher educators. All institutes mention the development of community competence in the mission statement within the study guides. As a result, we infer that they define the concept as important. However, they barely explain how community competence is implemented in the curriculum. It appears that the development of community

competence is weakly conceptualised within these curricula. For example, the study guides of two institutes mention that a teacher should be able to collaborate with his/her colleagues. Concerning how they have to learn to collaborate, the three institutes each formulate a different role in which community competence is expected to be acquired, namely 'teacher outside the class', 'teacher as a colleague and team member' and 'teacher as a member of the school organisation'. According to the study guide of one institute, the role is covered in the mentor groups and theme meetings, in the second institute the role is tackled in the mentor groups and in the portfolios end in the third institute it appears that student teachers should develop community competence as a home study activity. There is no elaboration on what these roles entail or what exactly the student teachers learn during the mentor groups, theme meetings, internships or home study activities.

Regarding the vision of teacher educators and heads of department, the majority of teacher educators and heads of department stated that collaboration is important for teachers, or even necessary in the teaching profession. An example of such a statement is the following: 'If a teacher is not able to work with others, learn with others, then you have a big problem. I find that pretty obvious'. Additionally, the majority of the educators (six of eight) and one head of department we interviewed about the role of teacher education stated that the teacher education institute should be a place where collaboration between student teachers and community development is stimulated. By contrast, two educators were not convinced that the teacher education institute is the place for student teachers to develop community competence. One teacher educator was convinced that it was necessary for student teachers to develop professionally in a way that is in accordance with their personality, meaning that if they do not wish to or are unable to collaborate, the teacher educator did not intend to encourage collaboration. The other teacher educator stated that the development of community competence should have taken place in the master's programme that the students had followed previously and, therefore, no longer needed to be a focus within teacher education.

2.3.2. Implemented curriculum

To distil the way in which the development of community competence is implemented within the curriculum, we will discuss in this section which activities are undertaken to stimulate community competence development, including reflection activities and assessment procedures. These activities are discussed in general because, concerning the implemented curriculum, no significant differences were found between institutes. However, consistently across the three institutes, there were several differences between the four groups' arrangements (mentor group, subject matter group, reflection

group and research group). The characteristics of the different group arrangements are summarised in Table 2.2.

The majority of teacher educators state that they stimulate the development of community competence throughout the four group arrangements. In the mentor, subject matter and reflection group, the teacher educators state that they organise collaborative activities for the student teachers in which relationships can be established and developed. In the research group, collaboration is stimulated, but student teachers are also allowed to carry out their research individually. However, the intention of the teacher educator to organise collaborative activities was not always visible in our observations or in the use of the ELE. In the mentor and reflection group, we observed much interaction between student teachers in discussing problems and questions and giving feedback on each other's products, which indicates that relationships are being built. However, in the subject matter group, we observed that the teacher educator played a central role in the classroom by providing many individual tasks or tasks to perform in pairs, so that little interaction was possible within the whole group. In addition, the ELE lacked signs of collaboration. It was mainly used as an information tool. In the few instances in which the ELE was deployed as a collaborative environment, the teacher educator played a central role in stimulating student teachers to use the environment in a collaborative way.

Table 2.2: Characteristics of Teacher Education Group Arrangements

Group	Number of student teachers	Goal	How is collaboration stimulated?	Activity of teacher educator	Use of ELE (electronic learning environment)
Mentor group	15-25	Big picture of being a teacher	All teacher educators said they gave tasks requiring collaboration	Mostly communication between teacher educator and student	7 of the 8 groups used an ELE, of which 3 used it as a collaboration tool
Subject matter group	3-40	Content-related issues, procedures and methods	Five of eight teacher educators said they stimulated collaboration by setting collaborative tasks.	Not much communication between teacher educators and students or between students themselves	Mostly for information, 2 groups used it as a collaboration tool
Reflection group	3-4	Exchange experiences	Teacher educators said full collaboration was inherent in the group	All teacher educators provided the students with methods to exchange experiences. 3 were present and active as chairmen or participants, 2 provided help	2 groups used it as a collaboration tool to prepare the reflection group

				when needed, 2 were not present at all	
Research group	Some individual, some in groups of 3-4	Performing practice-oriented research	All teacher educators stimulated conducting research in groups, but individual research projects were allowed	One teacher educator supervised the collaboration within the groups	Everybody used the ELE to reflect on each other's projects

Next, we will further elaborate on the specifics of the different groups. First, the *mentor groups* were groups in which student teachers worked on their own professional development as teachers. Most importantly, all five teacher educators responsible for such a group said that they stimulated community competence by setting collaborative tasks. The exact way in which they stimulated collaboration differed: three said they only used the 'teach what you preach' method by collaborating with other teacher educators, one organised team-building activities as well as emphasising the importance of collaboration verbally and one teacher educator used all three of these strategies. In accordance with the results of the interviews, we saw during our observations of four mentor groups that in three of these there were many opportunities for student teachers to engage with each other by discussing problems and questions, and to react and give feedback on each other's products. In one mentor group, there was much collaboration between the teacher educator and individual student teachers, but less between student teachers. The ELE of the mentor groups shows a less positive picture of how the development of community competence is implemented within the curriculum. We found that seven mentor groups used it and one did not. Only three of these, however, were very active in their use of the ELE as a collaboration tool. These had an active teacher educator who stimulated the discussion by posting regularly. In one of these groups, the student teachers were obliged to react on each other on a regular basis.

Second, the *subject matter groups* were groups in which student teachers followed subject-specific courses. These groups were concerned with content-related issues, methods and procedures. First, five of the eight teacher educators interviewed about this group said that collaborative activities were undertaken in these groups. On the other hand, during the observation of two subject matter groups, we saw that the teacher educators played a central role in the meetings. The student teachers usually had to perform tasks individually or in pairs. In addition, most subject matter groups used the ELE mainly as an information board and only two educators tried to use the ELE as a collaboration tool in which the student teachers were obliged to contribute to

the discussion forum. Although the teacher educators were closely involved and reacted regularly to the postings of the student teachers, the student teachers rarely reacted to each other.

In the *reflection groups*, the student teachers exchanged learning experiences. All nine teacher educators we interviewed about this type of group said that they gave the student teachers a stepwise reflection method which they could use to talk about their experiences. Seven teacher educators added information about their presence and role as an educator. With regard to their presence during the collaborative activities, two teacher educators reported they were not present at all during the meetings. Three said that they were present and active during the meetings – sometimes as participants only, sometimes as chairmen. Two did not participate in the meetings but were present in the classroom in case the student teachers needed help. With respect to the supervising activities of the teacher educator on the collaboration, two of them reported that they asked their students to post their experiences on the electronic environment of the mentor group or in the electronic portfolio in advance, and to react to each other's experiences. Five teacher educators also followed the collaboration within these groups afterwards, four asked for a report of the meetings to be put in the portfolio and one teacher educator asked student teachers about the process of these groups on a regular basis in the mentor groups. In addition to the descriptions of the teacher educators, during the observation of a reflection group we saw that student teachers interacted a great deal with each other and provided their group members with feedback on their experiences.

The last type of group was the *research group*, in which students were expected to carry out a research project. With regard to the development of community competence in this type of group, all eight teacher educators who had experience with these groups said that collaboration in conducting the research project was stimulated, but they did allow student teachers to perform their projects individually. They reported that when student teachers collaborated in conducting research, the collaboration was predominantly on a meta-level. A teacher educator explained this: 'What we want in the collaboration here is to keep each other focused, to help each other in formulating the research question, in executing the research plan, and in monitoring the time path'. Another teacher educator observed: 'Most students kept each other posted on their planning, some did the same subject, and a few shared their data'. One teacher educator said that she supervised the collaboration by asking her students how they collaborated, what they learned about it and what added value this collaboration had for their research projects. These questions can be seen as stimulating student teachers to reflect on the relationships they developed. Furthermore, we found that, with regard to the ELEs, all research groups in each institute used the same environment and were asked to give feedback on each other's projects.

The second aspect we looked for in the interviews was whether the teacher educators specifically organised reflection activities to stimulate community competence development. Although most teacher educators stated that they stimulate community competence through collaborative activities, there was considerable variation between teacher educators in whether their students had to reflect on their development of community competence, either in a general way in their portfolios or about specific group processes after working in a group. It also depended on the level of the student teacher at the beginning of the project, as the following quotation exemplifies: 'If I think it is difficult for a student I am more likely to ask him to write something about collaboration than students who already do it [collaboration] easily'. While three educators asked the student teachers to reflect regularly on the process in the groups at the institute, one educator only intervened when conflict arose between student teachers.

The last aspect relevant in determining whether teacher educators stimulate the development of community competence is whether and how this competence is assessed. On the basis of the interviews we can conclude that there was no consensus on how the development of community competence should be assessed. This is illustrated in the following quotations: 'There is no final attainment level for this competence' and 'This assessment is very difficult; it is very subjective'. Five teacher educators said that, as a consequence, community competence was not assessed explicitly. Two teacher educators stated that, although there were sometimes problems with the community competence of student teachers, it was not a reason to withhold a teaching certificate. One of them explained this as follows: "When it comes to the point that I have to withhold a certificate, then I notice that this [community competence] is always one [aspect] that I do not take into account in my judgement. If that judgement is discussed, you look for more evident things."

2.3.3. Attained curriculum

We report on the attained curriculum by clustering the results of the different types of data (interviews with student teachers and electronic portfolios) around the same topics that we used to discuss the implemented curriculum: first, we discuss the activities to stimulate the development of community competence, this is followed by a discussion of the reflection on and assessment of community competence. Also in the attained curriculum there were no significant differences between teacher education institutes.

The student teachers gave a slightly different view on the possibilities to collaborate with each other than the teacher educators. The majority of student teachers stated that there were many opportunities to collaborate with their fellow students

throughout the four group arrangements. They particularly liked the occasions when they exchanged experiences and felt their problems were recognised by other student teachers, which are indicators of developing relationships. A student teacher formulated this as follows: 'It is nice to hear that it is the same for the other [students], that others also have the same problems. We all have the same issues and it is nice to talk about these'. However, the student teachers also had critical remarks on the collaborative activities in the curriculum. For example, three of the six student teachers who reported on the subject matter groups, explained that it was not common to collaborate in these group. Much depended on the teacher educator of that specific group. Additionally, four student teachers reporting on the reflection groups explained that although the idea of exchanging experiences was useful, the way in which they had to do it was less than optimal. Their main problem concerned the stepwise methods they had to use to talk to each other. Without a teacher educator being present during the meetings, it was difficult to stick to these methods and to talk about their experiences on a higher level. A student teacher described it as follows: 'It is no better than the conversation I have with my fellow students in the pub. I do not think it is a disaster, but it should be stricter. It is just going wrong in the implementation phase. I think that during the meetings there has to be someone around to ask questions. Now it is left a bit to personal choice. We did it once with [the teacher educator]; then it went great'. Finally, four student teachers reported they collaborated in the research groups, although this was not compulsory. They chose to collaborate for pragmatic reasons, such as the fun of collaborating with friends or a lack of inspiration in choosing a topic.

As we now know how collaboration was perceived by student teachers in the four types of group, we will turn to how they perceived the reflection that they were required to undertake. It seems that there are no official guidelines concerning reflection activities. Six student teachers reported only individual reflection activities and one student teacher mentioned having to reflect within a group at the institute on what they did together and what they found difficult in this collaboration. These different perspectives on reflection between students are also visible when we consider the content of their portfolios. In the 46 portfolios we investigated, 41 student teachers mentioned instances in which they encountered colleagues in collaborative contexts. These reports, however, remained on a very descriptive level: for example, 'I have got involved with other teachers and attended the new teachers' drinks party on 31 October and eagerly engaged with other members of staff'. Only 24 portfolios included reflection on collaboration with colleagues. Collaboration with fellow student teachers hardly appeared in these portfolios, and if it was included it was briefly and only descriptively. Concerning the assessment of the development of community competence, the student teachers showed the same confusion as the teacher educators, confirming that there was no consensus on how the community competence should be assessed.

All seven student teachers that we interviewed about the assessment of community competence found that it was not very transparent. Furthermore, they reported differences between teacher educators and groups in this area. Two student teachers said that the assessment by their teacher educator was quite strict, whereas the other five felt it was quite lax, or did not even know for certain if their teacher educator had ever looked at their portfolios. This is illustrated by a quote from one student teacher about writing a report on his reflection group: 'You have to do it, but they do not check it. If you do not do it, you have to deal with it yourself'.

2.4 Conclusion and discussion

We investigated the extent to which three postgraduate teacher education institutes in the Netherlands pay attention to and aim to stimulate the development of community competence. This question was approached through three curriculum representations, the intended, implemented and attained curriculum. It appears that in the intended curriculum community competence is considered to be important, but in the implemented and especially the attained curriculum, the development of community competence receives less attention.

Looking at the intended curricula of the teacher education institutes, we found that the development of community competence was considered to be an important topic in the programmes. The study guides revealed that all institutes in some way or another stated the importance of developing community competence by their student teachers. This is in line with the descriptions provided by the teacher educators and heads of department, which show that almost all deemed it important for student teachers to develop community competence. At the same time, community competence was weakly conceptualised within the study guides. This weak conceptualisation was also apparent in the implemented curriculum, where the importance denoted by teacher educators in the intended curriculum was not systematically reflected in their own descriptions of their actions. Teacher educators reported that they paid attention to community competence in the sense that they organised different collaboration activities. At the same time, only a few teacher educators said they stimulated reflection on the development of community competence. Most teacher educators believed that community competence was adequately developed by only taking part in collaborative activities. Additionally, most teacher educators stated that community competence was not given explicit attention within the assessment procedure, and for two teacher educators a certain minimum level of community competence was not necessarily a requirement for receiving the teacher's certificate. This lack of systematic assessment of the development of community competence is probably related to the

fact that community competence was weakly conceptualised in the study guides. From observations and examination of the ELEs we found that there were many differences between the teacher educators in how they implemented attention for community competence development both face-to-face and in the ELE. In the meetings, some teacher educators played a very active role in stimulating student teachers to collaborate, whereas others did not. With regard to the ELE, differences were even greater, as some teacher educators did not use this environment at all, while others used it very intensively and as a real collaborative tool.

The attained curriculum further complicates the picture. Student teachers said that there were opportunities to collaborate within the programme, especially in the mentor, subject matter and reflection groups, but there were differences in how much they appreciated this. The opportunities to share experiences were mostly highly valued, but much depended on the presence or absence of the teacher educator. In the portfolios, we observed large differences in the amount of attention that student teachers paid to describing their learning processes concerning community competence and in the depth of reflection on this topic. Our findings provide a further specification of the statement of Beck and Kosnik (2001) and Timoštšuk and Ugaste (2010) that teacher education is still very individualistic. We found that the study guides, teacher educators and heads of department all underlined the importance of the development of community competence in the intended curriculum, but the conceptualisation of this concept in practice was weak. Concerning the implemented and attained curricula, teacher educators, student teachers and the materials showed that there was no systematic and explicit policy for stimulating the development of community competence of student teachers. A consequence of the above-described practice of teacher education institutes is that student teachers do not systematically learn how they can benefit from collaboration with colleagues and fellow student teachers and they do not intentionally learn how to reflect on their own community competence. When they begin to work in schools after completing their educational programme, this may prevent them from contributing to, as well as benefiting from, teacher communities. Although the effect of participating in communities on the teaching performance of the teachers or the learning process of the pupils is not straightforward, it is obvious that contemporary teaching practice demands collaborative teachers with sufficient community competence. As this was acknowledged and addressed in the intended curriculum of the three teacher education institutes, it was relevant to study if and how this was conceptualised, operationalized and experienced at the implemented and attained curriculum levels.

This study was conducted in three representative teacher education institutes in the Netherlands. As noted at the beginning of this article, the Dutch government prescribes different competence standards for teachers, one of which is the ‘interpersonal

competence for collaborating with colleagues'. Therefore, it is not surprising that the three teacher education institutes addressed community competence in their study guides. However, as the government leaves much freedom for teacher education institutes to determine how they include each of the prescribed competences in their programmes (Swennen, Volman, and Van Essen 2008) the specific content of the study guides is defined by the views of the teacher educators and heads of department. This leads to a weakly defined definition of community competence in the study guides. We wonder whether the variance in the implementation of educating towards community competence in different curriculum perspectives is smaller in other countries, where the curriculum is defined and supervised by the government more firmly (Swennen, Volman, and Van Essen 2008). It would also be interesting to investigate how student teachers acquire community competence during teacher education, in order to determine at which points this development can be stimulated within the programme. Additionally, with the evolution of teacher education towards professional development schools, another interesting question is whether and how these school-institute partnerships can stimulate the development of community competence and communities in student teachers' daily practice in school.

Given that the concept of communities is frequently used in the educational literature (Newmann & Wehlage, 1995; Grossman, Wineburg, & Woolworth, 2001; Little, 2003; Hammerness, Darling-Hammond & Bransford, 2005), it is interesting to see that teacher education is struggling with the conceptualisation and implementation of community competence. At the same time, it appears from the findings of our study of the intended curriculum that the development of community competence is deemed an important component of the teacher education curriculum. We believe that there are currently opportunities within teacher education programmes to stimulate the development of community competence more explicitly that are left unexploited. A possibility for optimising the level of attention given to community competence can be found in an explicit design focusing on learning to collaborate and acquiring community competence. We believe that all types of groups discussed in this paper can be fruitful environments for this, but especially the mentor and reflection groups, as these have the inherent goal of learning to collaborate. In all groups the ELE can be used much more for collaboration. The design should include guidelines for teacher educators, not only for using collaborative activities, but also for stimulating reflection on these activities. These reflective activities can be performed both in groups and individually in the portfolio. For both of these activities, student teachers should be given tools to help them in reflecting on their community competence. Teacher educators can then use these reflections in their assessment of student teachers' community competence. Only when aims concerning the development of community competence at the in-

tended curriculum level are operationalized, assessed and experienced at the implemented and attained levels, can a teacher education programme be considered to pay sufficient attention to those key factors of teacher competence.

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Chapter 3

Community building of (student) teachers and a teacher educator in a school-university partnership[2]

School-university partnerships (SUPs) are considered a way of improving teacher education. For the successful implementation of such partnerships, cooperation between the different stakeholders is of crucial importance. Therefore, most partnerships are organized in short- and long-term teams, which are usually composed of teachers, student teachers, and representatives of the university faculty. This study focused on the collaboration process of a team of modern language teachers who work and learn together in a teacher community. The aim of this study was to investigate how to design a learning environment that stimulates community development in these teams, applying the cooperative learning model of Johnson and Johnson (1999). Based on this model, design principles were developed to stimulate community development in this group. Community development was measured through observations of the meetings of the group, using the community model of Admiraal, Lockhorst and Van der Pol (2012). Five principles were found relevant in this SUP team: profiling the group as an identity, equivalent cooperation, rotating the chairperson, reflecting on the collaboration and giving feedback on the products made in the group.

2 Vandyck, I., De Graaff, R., Pilot, A., & Beishuizen, J. J. (2012). Community building of (student) teachers and a teacher educator in a school-university partnership. *Learning Environments Research, 15*, 299–318.

3.1 Introduction

Over the last few decades, teacher education programmes have implemented school-university partnerships (SUPs) as a response to international critics on the effect of teacher education on teaching practice (Ginsberg & Rhodes, 2003; Darling-Hammond, 2000; Grossman, 2008). Those partnerships focus on both the education of student teachers and the professional development of teachers (Castle, Fox & O'Hanlan Souder, 2006; Ridley, Hurwitz, Hackett & Miller, 2005). In the Netherlands, the implementation of school-university partnerships has started only recently, pressured by the threatening shortage of teachers (Lunenberg, Snoek, & Swennen, 2000). At this point, the variation in SUPs is high, ranging from training with and in the school, to training by the school (Maandag, Deinum, Hofman, & Buitink, 2007). Consequently, there is as yet no consensus on how to develop a learning environment to support the learning process of both student teachers and teachers in such a partnership.

From the international literature on SUPs and more specifically, on professional development schools (Holmes Group, 1986), we can conclude that the collaboration process between the different stakeholders is of utmost importance (Lefever-Davis, Johnson, & Pearman, 2007). Structural partnerships alone are not sufficient; meaningful collaboration between school and university is a prerequisite to the education of student teachers and the professional development of teachers (Smedley & Van Rooy, 1996; Lefever-Davis, Johnson, & Pearman, 2007). Therefore, most SUPs are organized in short- and long-term teams, which are usually composed of teachers, student teachers, and representatives from the university faculty (Metcalf-Turner & Fischetti, 1996). However, most literature on collaboration in SUPs has focused on what we call the macro-level: the relationship between the school and the university in which the partnership is studied as a community of teachers, student teachers, pupils, management, parents, teacher educators, university staff, and other stakeholders. Research in this area is concerned with the development of the partnership and focuses on variables as roles and responsibilities (e.g., Grossman, 1994); common goals (e.g., Kochan & Kunkel, 1998); prior history (e.g., Lefever-Davis, Johnson, & Pearman, 2007); different cultures (Goodlad, 1993) and other variables supporting or undermining the effectiveness of a school-university partnership. Less is known about the collaboration within the teams; the micro-level of the community in the school in which student teachers, teachers, and teacher educators participate on a daily basis. Literature on SUPs also using the micro-level of the group as a unit of analysis focuses mainly on the learning process of the student teachers (e.g., Buitink, 2009); the activities of the teacher educator (Van Velzen & Volman, 2009); identity construction (Trent & Lim, 2010); etc. This

implies that they do not focus on the collaboration process or the community development in these situations. Additionally, we follow the reasoning of Firestone and Fisler (2002, p.450) that "a micropolitical perspective is a useful way to view such partnerships"..."the professional community ideal is more feasible for subunits within partnerships than for whole partnerships".

In this chapter we focus on the collaboration process of a team of student teachers, teachers, and a teacher educator from the community perspective of Lave and Wenger (1991). We present a theoretical framework and a case study in which we study the community development process of a group of modern language teachers who work and learn together for one school year. As this study is part of a larger design-based research project, the aim was to develop, implement, and evaluate design principles to stimulate community development of this group. In the following sections, the case-study and theoretical framework is described. The community model by Admiraal, Lockhorst and Van der Pol (2012) is presented as a descriptive framework for describing (changes in) the *level* of community of a group of teachers. To describe the stimulation of community *development* in the teacher community, we used the Learning Together model of Johnson and Johnson (1999) as a source of inspiration to formulate design principles.

3.1.1 Case study under investigation

In the Netherlands, school-university partnerships are a form of learning in the workplace in which student teachers learn according to the principle of "learning through participation in real, meaningful practices" (Ten Dam & Blom, 2006, p.649). Together with the teacher educator of the university and the teachers of the school, student teachers form a community of practice, in which they collaborate with and learn from, and with, each other.

The case study under investigation was part of a postgraduate teacher education institute. Students enrolling in such a program have already obtained a master's degree in a relevant school subject. The program consist of a one-year teacher training course; half of the year is spent on school-related activities and the other half is dedicated to activities in the institute. School-related activities are performed in the form of an internship or a paid job at a school; they involve actual classroom teaching and sometimes class observation and classroom-related research as well. Students spend one or two days a week at the institute, and also perform activities for the institute at home or at school. The school under investigation provided possibilities for internship for the student teachers of the 1 teacher education program, but no official school-university partnership was accomplished. This case study consisted of a group of teachers, student teachers, and a teacher educator, who worked together to improve

the pedagogy of modern languages and to develop lesson series, characterized by active learning situations. This group was chosen because it was the only project in our teacher education programme that met our demands most adequately. Our most important demand was the participation of teachers, student teachers and a teacher educator. Additionally, we wanted a group to start voluntarily without any intervention of the school management or teacher education institute. Finally, we selected this group because they maintained a developmental philosophy, meaning that it was not the intention to "educate" the student teachers but to develop as professionals in interaction with each other and with the environment.

The group had its origin in the school year prior to the start of the project. The teacher educator functioned as an educator at the university and at the same time as a teacher French at the particular school. In cooperation with another teacher French, they developed lesson series to improve their teaching. Other language teachers were interested in their work and wanted to join the collaboration. At that point, the management of the university and the school wanted to attract student teachers to maximize the effect of the collaboration. It was believed that teachers, as experts in practice, and student teachers, as experts in new learning theories, could behave as complementary forces stimulating each other to learn. Teachers can benefit from increased knowledge, more collegial interaction, and leadership skills (Sandholtz & Merseth, 1992) while the student teachers can benefit from the experience of the teachers and the increased theory-practice link.

To stimulate this initiative, the management of the school decided to give the participants of the group a time and place to collaborate with each other. The project lasted for one academic year. During the first four months, the group members met once a week. In the second half year, the management of the school decided not to facilitate the collaboration of this group any more. As a consequence the group persisted in their goals, and met in their spare time, diminishing their meeting time to once a month. At the end of the school year, the group presented a document for other modern language teachers with the developed and implemented series of active lesson plans. During the time of the project, two students left the school to finish their internship at another school. For comparison, this case study could be perceived as a partner model (Buitink & Wouda, in Maandag et al., 2007), meaning that the school is responsible for a part of the teacher education. Experienced teachers are teaching courses, supervising student teachers and training the other supervisors working in the school. The training institute provides instruction in the subject and the more conceptual themes in the course.

3.1.2 Teacher communities

The cooperation process of this case study was investigated from a community perspective. In the Dutch context, student teachers in a SUP "participate in school practice in a way which can be described as legitimate peripheral participation in a community of practice, a community that acts as a living curriculum for the apprentice" (Van Velzen & Volman, 2009, p. 347). According to Wenger (1998), communities of practice are defined by combining three elements: a sense of joint enterprise, mutuality, and a shared repertoire. These three elements are combined with the descriptions of communities by Bellah, Madsen, Sullivan, Swidler, and Tipton (1985) and Grossman, Wineburg, and Woolworth (2001) into the community model of Admiraal, Lockhorst, and Van der Pol (2012).

A teacher community is defined as a group of teachers who are socially interdependent, who participate together in discussion and decision making, and share and build knowledge with a group identity, shared domain, and shared interactional repertoire. *Group identity* is described as mutual engagement that binds teachers together in a social entity. *Shared domain* is defined as a joint enterprise as understood and continually negotiated by its members. Finally, *shared interactional repertoire* is characterized by a shared practice and beliefs on how teachers in a group interact. These three dimensions consists of nineteen indicators (see Table 3.1); *Group identity* consists of identification, multiple perspective contribution, mutual trust and responsibility, social ties, emotional safety, spiritual bond, sense of collectivism, neighbourliness, and co-worker support. *Shared domain* is composed of four indicators: commitment to domain, common ground, collective goal and shared knowledge. *Shared interactional repertoire* is concerned with intellectual building, regulation of interaction, role taking, dynamic effort, dynamic position and interactional norms.

Table 3.1: Dimensions and Indicators of Admiraal, Lockhorst, and Van der Pol's (2012) Community Model

Dimensions of the community model	Indicators
1. Group identity	1.1 Identification
	1.2 Multiple perspective contribution
	1.3 Mutual trust and responsibility
	1.4 Social ties
	1.5 Emotional safety
	1.6 Spiritual bond
	1.7 Sense of collectivism
	1.8 Neighbourliness

Dimensions of the community model	Indicators
	1.9 Co-worker support
2. Shared domain	2.1 Commitment to domain
	2.2 Common ground
	2.3 Collective goal
	2.4 Shared knowledge
3. Shared interactional repertoire	3.1 Intellectual building
	3.2 Regulation of interaction
	3.3 Role taking
	3.4 Dynamic effort
	3.5 Dynamic position
	3.6 Interactional norms

To describe the development of a community, the community model of Admiraal, Lockhorst, and Van der Pol (2012) differentiates between three markers:

- Limited: The community processes are characterized by limited feelings of group identity, feeling, and some degree of shared patterns, procedures and willingness to be active in the domain.
- Moderate. The community processes are characterized by consciousness of the group identity and development of collective activities.
- Strong. The community processes are balanced, shared and focused on a shared domain and feelings of group identity.

In this study we focused on the community behaviour of the group. Therefore, to measure community development, we used only the indicators which are observable in groups, more specifically, the indicators identification, multiple perspective contribution, mutual trust and responsibility, social ties, commitment to domain, common ground, collective goal, shared knowledge, intellectual building, regulation of interaction, role taking, and dynamic effort. The community level of the group was measured on several occasions, to see whether change in level occurred. Dimensions, indicators, and markers are used in combination to describe how, in each of the three phases the community behaves on each indicator.

3.1.3. Design principles

This case study is the first part of a design-based research project consisting of three cycles of design, implementation, and evaluation. The result of design-based research is the formulation of design propositions, which offer heuristic guidelines as described by Van den Akker (1999): *If you want to design intervention X for purpose Y in context*

Z, then you are best advised to give that intervention the characteristics of C and do that via procedures P because of theoretical arguments T and empirical arguments E.

To stimulate community development, we developed design principles, which focused on cooperative learning. According to Summers, Beretvas, Svinicki, and Gorin (2005), cooperative learning is, next to connectedness, one of the main predictors for a community. The most known and studied theory of cooperative learning is the *Learning Together* model of Johnson and Johnson (1999). The success of this model can be ascribed to its high external validity and generalizability to a diversity of subjects, settings, age levels, nationalities, and cultural backgrounds (Johnson & Johnson, 1998). The Learning Together model is less prescriptive than other models and therefore provides teachers with a flexible conceptual framework to plan cooperative learning according to their circumstances, needs, and contexts (Ghaith 2003). Therefore, we used this framework to develop our design principles.

Johnson and Johnson (1999) defined five conditions under which cooperative learning is effective: promotive interaction, individual accountability, interpersonal skills, group processing, and positive interdependence. Based on their definitions and characteristics, these five conditions were elaborated and specified for this situation into a set of 14 design principles. We used the conditions of Johnson and Johnson as heuristic guidelines and adapted them to the specific characteristics of this type of group, such as her heterogeneous character. Additionally, we hypothesized how these design principles could affect the community level of the group. For example, Johnson and Johnson (1999) defined promotive interaction as individuals encouraging and stimulating each other to complete tasks and reach the group goals. Group members help each other by exchanging resources, providing constructive feedback and challenge each other. The first five design principles (Table 3.2) combined these characteristics with the heterogeneous character of the group and the different perspectives of the group members. The sixth design principle is derived from the second condition of individual accountability in which each individual is supposed to contribute to the group goals and is responsible for his contribution to the group product. The third condition is the appropriate use of interpersonal and group skills. Group members must get to know and trust each other, communicate accurately and unambiguously, and resolve conflict constructively. Design principles 7, 8, and 9 focus on learning to know each other and improving interpersonal and group skills in the hope it results in more trust and a better communication. The fourth condition is group processing, which means that groups should reflect on how well they are functioning. However, to improve the interaction within the group, an additional design principle was needed so that the cooperation is not only discussed ad hoc but also facilitated by determining norms and values beforehand. The final condition is positive interdependence, which exists when participants perceive that they are linked with other group members in

such a way that the group cannot succeed unless the other group members succeed also. There are different ways to reach positive interdependence: goal, reward, resource, role, task, identity interdependence, etc. In this study we focused on goal, task and identity interdependence to stimulate shared goals, a common group identity and appreciation for each other's knowledge and strengths. Table 3.2 presents these design principles coupled with the three dimensions and the 12 observed indicators of the community model. This table can be interpreted as follows: "*if the first design principle is implemented, we assume a positive effect on indicators multiple perspective contribution, mutual trust and responsibility, social ties, collective goal and shared knowledge".*

In this chapter, we will describe whether and how these assumed effects hold for a community of (student) teachers and a supervisor in a SUP. The central research question in this study is: *what design principles* contribute *to the development of communities of student teachers, teachers and supervisors in a school-university partnership?* This research question is divided in two sub questions:

- What design principles for the development of communities are feasible for the community in a school-university partnership?
- Are these design principles effective for the community in a SUP to develop?

Table 3.2: Design Principles and Their Proposed Effect on the Indicators and Dimensions

Conditions for cooperative learning	Design principle	Predicted effect on indicators	Effect on dimensions of the community model
Promotive interaction	1. It is emphasized that everyone is equivalent so that both student teachers and teachers can learn from each other and help each other reach the group's goals.	Multiperspective contribution Mutual trust and responsibility Social ties Shared goals Shared knowledge	Group identity Shared domain
	2. Group members are stimulated to challenge each other by making use of the different perspectives of the participants.	Multiperspective contribution Differences in educational perspectives Intellectual building Shared knowledge	Group identity Shared domain
	3. It is made clear to every group member that every participant has a different perspective and is stimulated to exchange each other's definition of important concepts.	Common ground Differences in educational perspectives Shared knowledge	Shared domain
	4. Group members are asked to give feedback on each other's products.	Shared knowledge	Shared domain
	5. Group members are stimulated to exchange resources.	Shared knowledge	Shared domain
Individual accountability	6. Every group member is obliged to contribute to the products and goals of the group.	Dynamic effort Commitment to domain Shared goals Shared knowledge	Interactional repertoire Shared domain
Interpersonal and group skills	7. The group learns to know each other's qualities, expectations, and concerns and is stimulated to take these into account.	Multiperspective contribution Mutual trust and responsibility Social ties	Group identity
	8. Group members were stimulated to improve their basic interpersonal skills, i.e. listening, asking questions, providing feedback, summariz-	Social ties Intellectual building	Group identity Interactional

Conditions for cooperative learning	Design principle	Predicted effect on indicators	Effect on dimensions of the community model
	ing, etc.		repertoire
	9. Group members were stimulated to improve their group skills, i.e. leadership skills, negotiation, decision-making, problem-solving, flexibility, etc.	Social ties Regulation of interaction Role taking	Group identity Interactional repertoire
Group processing	10. The group formulates norms and values to interact with each other.	Social ties Regulation of interaction	Group identity Interactional repertoire
	11. Group members are asked to reflect on the collaboration of the group.	Regulation of interaction	Group identity Interactional repertoire
Positive interdependence	12. Identity interdependence is stimulated by profiling the group as a unit.	Identification	Group identity
	13. Task interdependence is stimulated by providing the group with authentic tasks in which both the knowledge of student teachers and teachers is needed to accomplish the task.	Multiperspective contribution Differences in educational perspectives Commitment to domain Shared goals Shared knowledge	Group identity Shared domain
	14. Goal interdependence is stimulated by negotiating shared goals and defining a common goal.	Commitment Shared goals	Shared domain

3.2 Method

3.2.1 Participants

The case study under investigation consisted of a group of modern language teachers, student teachers, and a teacher educator. More specifically, the group consisted of seven participants: two student teachers English, one student teacher French, one student teacher German, one teacher English, one teacher French and also the teacher

educator taught French. Two student teachers were pre-service teachers who followed an internship at this high school. The other two student teachers were in-service teachers who had a paid job at this school, next to their educational program. After four months, the two pre-service teachers finished their internship and left the school.

3.2.2 Procedure

The design principles (Table 3.2) were implemented in co-design with the responsible teacher educator according to the pragmatic design paradigm (Visscher-Voerman & Gustafson, 2004). Before the project started, the educator and researcher met two times to discuss the design principles and propose activities. During the project, every meeting of the group was prepared and evaluated by the educator and researcher, in which the teacher educator was responsible for the activities, while the researcher monitored the implementation of the design principles. At the end of the first half of the time period of the project, a questionnaire was administered to the student teachers and teachers about the procedure of the meetings, the role of the educator, the structure of the meetings, the products, the electronic learning environment, the collaboration in the group, and the learning outcomes. The results of this questionnaire were summarized and discussed in the following meeting. Based on the meetings between the educator and the researcher, the questionnaire and the discussion in the group, the activities were continuously adapted during the process of implementation. An overview of activities, which were proposed by the teacher educator, is found in Table 3.3.

Table 3.3: Design Principles and Interventions

Design principles	Interventions
1. It is emphasized that everyone is equivalent so that both student teachers and teachers can learn from each other and help each other reach the group's goals.	Modelling of the educator. Educator explicitly states that the participants should treat each other as equal learners. Educator explicitly states that it is not the goal of the group to educate the student teachers but to professionalize also the teachers.
2. Group members are stimulated to challenge each other by making use of the different perspectives of the participants.	Educator asks student teachers and teachers to give their view on the problem. The educator asks the student teachers to challenge the opinions of the teachers, based on the theoretical framework they learned and vice versa.
3. It is made clear to group members that every participant has a different perspective and is stimulated to exchange each other's definition of important concepts.	In the beginning of every meeting, the subject is explained and the important concepts are discussed until common ground is reached.

Design principles	Interventions
4. Group members are asked to give feedback on each other's products.	At each meeting of the group, the products of the group are discussed and reflected on.
5. Group members are stimulated to exchange resources.	A summary of each meeting with the end products is put on the group page in the electronic environment. The participants are asked to react on the summary and on the products they developed.
6. Every group member is obliged to contribute to the products and goals of the group.	Every group member receives a specific task and is expected to perform this task and share their outcomes. The educator pays attention to the contribution of every participant of the group and asks silent participants to join the discussion.
7. The group learns to know each other's qualities, expectations, and concerns and is stimulated to take these into account.	At the first meeting of the group, a game will be played to know each other's strengths. Furthermore, expectations and problems are discussed.
8. Group members were stimulated to improve their basic interpersonal skills, i.e. listening, asking questions, providing feedback, summarizing, etc.	Modelling of the educator. Discussing and evaluating the social process when conflict occurs.
9. Group members were stimulated to improve their group skills, i.e. leadership skills, negotiation, decision-making, problem-solving, flexibility, etc.	Modelling of the educator. Discussing and evaluating the social process when conflict occurs.
10. The group formulates norms and values to interact with each other.	In the first group meeting, the group formulates standards about the interaction between members. In the first group meeting, the group plans the meetings and the content of the meetings for the next half year. Additionally, the structure of the meetings is decided.
11. Group members are asked to reflect on the collaboration of the group.	After each meeting, the meeting is evaluated. This informal evaluation can be concerned about the content, the structure, or the collaboration process. After four months, a formal evaluation is held. The participants are asked to fill in a questionnaire about the project. The outcomes of the questionnaire are discussed in the following meeting.
12. Identity interdependence is stimulated by profiling the group as a unit.	Group members are asked to embellish the group page in the electronic environment, including a short summary introducing them as one group. Group members give presentations to the dean of the school, to their colleagues (teaching the same subject) and to other staff of the school. Group members participate in two symposia outside the school.
13. Task interdependence is stimulated by providing the group with authentic tasks in which both the knowledge of student teachers and teachers is needed to accomplish the task.	During the meetings, the group members develop a concrete product, which is authentic and meaningful for them. Each student teacher is partnered with a teacher. The task is formulated so that both the knowledge of the student teacher and the teacher is

Design principles	Interventions
	needed to accomplish the task.
14. Goal interdependence is stimulated by negotiating shared goals and defining a common goal.	In the first meeting, the individual goals are listed and shared goals are defined. On a regular basis these goals are evaluated and adapted.

3.2.3 Data sources and analysis

The group had 20 meetings, of which 14 meetings were videotaped. Due to technical problems, only ten tapes were available for analysis. These 10 tapes were used to analyse whether the teacher educator implemented the design principles and activities as intended. For each tape/meeting, the first author described the activities of the teacher educator related to the 14 design principles. To determine that a design principles was feasible in the school-university project, this design principle had to be entirely implemented as intended. We analysed therefore the specific activities of the teacher educator.

From those tapes, 17 fragments of approximately 10 minutes each were selected to measure whether the implemented design principles are effective in stimulating community development. These 17 fragments consisted of 12 fragments of the first period during which the group met once a week and five fragments of the second semester during which they met once a month. These fragments were selected, based on the content of the meeting and the group composition. As this study focused on content-based whole-group community development, fragments in which the group worked in subgroups, fragments in which the group consisted of less than three persons, and fragments in which the group talked about content not relevant for the project, were not considered. The resulting 17 fragments covered three categories of activities: task execution (4), logistical discourses (4), and discussion fragments (9). These 17 fragments were analysed on their community level using the observation protocol of Lockhorst (2008). To establish reliability and validity, this measurement instrument was used by the author of the article by Lockhorst (2008), the first author of this article and the other two main researchers of the larger project team of which this research is part of. Throughout three rounds of independent rating and subsequent discussion, fragments of each project were scored on community level until full agreement was reached. This procedure was considered to be sufficiently reliable.
For each fragment, a description was made of all activities of the group, categorized in the 12 observable indicators of the community model, as described above. Each fragment of ten minutes was first observed entirely and relevant utterances, gestures and

activities were written down in the matching indicators. Next, the fragment was observed again for each dimension separately looking for the presence of the indicators. The descriptions included both verbal utterances and non-verbal gestures. Based on the qualitative descriptions, for each fragment, the group was positioned on a scale of 1 to 3 per indicator, corresponding to the limited, moderate, and strong phase of community development. To measure the development of the community, the fragments in the beginning of the project (the first three meetings) were compared with the fragments at the end of the project (the last three meetings).

3.3 Results

3.3.1 Implementation of design principles

In this section, we discuss the first sub question: *what design principles are feasible in a school-university partnership?* To answer this research question, the 12 videotapes of the 10 meetings were used to determine the level of implementation. For each meeting, the activities of the teacher educator were described to determine whether and how the design principles were implemented. Table 3.4 presents the design principles which were implemented and shows in how many meetings the specific design principle was implemented.

Table 3.4: Design Principles Implemented with the Number of Meetings in which these Principles were Implemented

Design Principle	Number of Meetings
1. It is emphasized that everyone is equivalent so that both student teachers and teachers can learn from each other and help each other reach the group's goals.	7
2. Group members are stimulated to challenge each other by making use of the different perspectives of the participants.	6
4. Group members are asked to give feedback on each other's products.	8
5. Group members are stimulated to exchange resources.	9
6. Every group member is obliged to contribute to the products and goals of the group.	6
7. The group learns to know each other's qualities, expectations, and concerns and is stimulated to take these into account.	5
11. Group members are asked to reflect on the collaboration of the group.	4
12. Identity interdependence is stimulated by profiling the group as a unit.	7
14. Goal interdependence is stimulated by negotiating shared goals and defining a common goal.	6

Design principles 3, 8, 9, 10 and 13 were not implemented. We now discuss the way the other design principles were implemented.

Design principle 1, "*It is emphasized that 1 everyone is equivalent so that both student teachers and teachers can learn from each other and help each other reach the group goals*" was implemented in seven of the ten meetings. During the beginning of the project, the teacher educator emphasized often that the goal of the group was not to educate student teachers but to learn from teachers, student teachers, and the educator; that both student teachers and teachers should be seen as equivalent partners in learning. The teacher educator also asked the two subgroups what they could learn from each other. During the project, an informal evaluation was held which was important in relation to this design principle. Initiated by one of the student teachers, group members stated that they had issues with the formal status and position of their colleague group members. Student teachers felt they were expected to see the teachers and teacher educator as equivalent partners during the group meetings but as formal leaders outside of the group. This led her to conclude that she was not only seen as the informal leader of the group, but also as an expert and as a formal authority. As a consequence, she felt she was not given the opportunity to learn herself. To support the teacher educator in her learning process and to diminish the effects of hierarchical positions on the learning process of the group, it was decided to rotate the role of chairing the meetings. In this way, the role of the leader was detached from the role of the teacher educator as an expert. Secondly, student teachers and teachers would recognize each other's expertise in the theoretical and practical field. Finally, this intervention was suggested to improve the feeling of project ownership.

Design principle 2, "*Group members are stimulated to challenge each other by making use of the different perspectives of the participants",* was implemented in six meetings, interestingly, in the first and last three meetings of the project. In the first three meetings, the teacher educator made explicit how both subgroups could challenge each other. In the last three meetings, the teacher educator only used the strategy of modelling by asking both the student teachers and teachers to give their perspectives on the problem.

Design principle 4, "*Group members are asked to give feedback on each other's products"* was implemented in eight meetings. In six of these, the feedback was concerned with the products made in that meeting. In the other two instances, the feedback focused on the lesson materials made in a previous meeting and the try-out of these lessons in (student) teachers' classes between the meetings.

Design principle 5, "*Group members are stimulated to exchange resources"* was implemented in nine meetings, although not in the activities proposed initially by the teacher educator. The activities focused on the modelling of the educator by exchanging resources and by asking the other group members to deliver their materials to each

other through the electronic environment. In spite of extensive ICT training and support, the group persisted in using their offline mailboxes and face-to-face meetings to exchange resources.

Design principle 6, "*Every group member is obliged to contribute to the products and goals of the group",* was implemented in six meetings, in which the educator focused mainly on discussing the outcomes of the tasks.

Design principle 7, "*The group learns to know each other's qualities, expectations and concerns and is stimulated to take these into account",* was implemented in five meetings. In the first meeting, a game was played to get to know each other and each other's strengths. In addition, the needs and expectations of the group members were discussed. The educator implemented this principle also in four other meetings, three of which were at the beginning of the project. In these meetings, the teacher educator spent a lot of attention discussing the needs and expectations of the group members.

Design principle 11, *"Group members are asked to reflect on the collaboration of the group"*, was implemented in four meetings. In these four meetings, the group held informal evaluations about the structure and content of the task and the interaction between the group members. The formal evaluation was held after four months, in which the participants were asked to fill in a questionnaire. The results were presented in the following meeting. No further reflection occurred in that meeting.

Design principle 12, *"Identity interdependence is stimulated by profiling the group as a unit"*, was implemented in seven meetings. In four of the meetings, the educator started a discussion about the qualities and the future of the group. In two meetings, the group prepared to profile itself at conferences and presentations to the school. The teacher educator added another intervention, which was not intended to stimulate identity interdependence but had an important influence on the profiling of the group. In the beginning of the project, the group met in a separate room so they would not be disturbed by other staff. After approximately two months, the group asked to move to the school's canteen. Initially, because the group found it too time-consuming and difficult to search for a room that was available; eventually, "to let them [other staff] see what we are doing together" (teacher).

Design principle 14,"*Goal interdependence is stimulated by negotiating shared goals and defining a common goal",* was implemented in six meetings. In the first meeting, the teacher educator listed the expectations and goals of the group members. In two meetings, the educator asked whether the individual goals changed during the project and whether these were met. In three meetings, she asked the group members whether the subject of that meeting corresponded to the expectations of the group.

3.3.2 Community development

To answer the second sub question whether these implemented design principles were effective in stimulating community development, we will describe in the this section the differences in community level at the beginning and the end of the project and relate this development to the implemented design principles. The results will be described using the three dimensions and the 12 observable indicators of the community model, specified for the collaborative categories 'discussion', 'task execution' and 'logistical discourse' when relevant. The results are summarized in Table 3.5.

Table 3.5: Effects of Design Principles

Design principle	Effect on indicator
1. It is emphasized that everyone is equivalent so that both student teachers and teachers can learn from each other and help each other reach the group's goals.	Social ties (from moderate to strong) Role taking (from moderate to strong)
6. Every group member is obliged to contribute to the products and goals of the group.	Dynamic effort (from accepting differences in effort to equally divided effort)
7. The group learns to know each other's qualities, expectations and concerns and is stimulated to take these into account	Social ties (from moderate to strong)
11. Group members are asked to reflect on the collaboration of the group.	Regulation of interaction (from teacher-dominated regulation to group regulation)
12. Identity interdependence is stimulated by profiling the group as a unit.	Identification (from limited to moderate)

For five design principles an effect on one or more indicators for the community level could be identified. Design principle 1 on equivalent cooperation had an important effect on the indicators *"social ties"* and *"role taking"*. The activities concerning *"social ties"* shifted from moderate to strong. During the project, there was a positive atmosphere and an informal setting and relationships were built. At the end of the first half of the project, the positive atmosphere increased and the informal, polite atmosphere shifted to a friendly, amicable sphere. This shift was seen most clearly in the discussion fragments. The same development was found on the indicator *"role taking"*. In the beginning of the project, the teacher educator had the role of chairperson and leader. In informal evaluations, this was made explicit and accepted by the group, a characteristic of "role taking" in the moderate phase. At the end of the project, group members took up other roles spontaneously, not only in relation to chairing meetings (facilitated

by the "rotating chairmanship" principle), but also in relation to the roles of critical friend, time manager, regulator of interaction, and devil's advocate.

Design principle 6, "every group member is obliged to contribute to the products and goals of the group", influenced a change in the behaviour of the group members on *"dynamic effort"*. Although the behaviour of the group members was categorized in the strong phase, both at the beginning and the end of the project, a change in behaviour was seen in the qualitative analysis. In the beginning, differences in effort were accepted while at the end, dynamic effort was smoothly equally divided.

Further, we found that when the group learns to know each other's qualities, expectations and concerns and is stimulated to take these into account (design principle 7), the social atmosphere of the group improved.

Design principle 11, "group members are asked to reflect on the collaboration of the group", did change the *"regulation of interaction"* from teacher-dominated regulation to group regulation. All fragments scored strong on "regulation of interaction". In general, the teacher educator regulated the interaction and this was accepted by the group members. Looking more closely at the qualitative descriptions of the behaviour of all group members, a change in behaviour was noticed. In the beginning the interaction was completely regulated by the teacher educator, followed by a period of smooth interaction in which no one regulated the interaction, resulting in the final phase of the project being characterized by smooth interaction or regulated by all group members.

Finally, design principle 12 on stimulating identity interdependence had an effect on the indicator "i*dentification",* which developed from limited to moderate. In the beginning of the project, group members did not identify with the group as a whole; they did not refer to the group as "our" group; they did not refer to the history of the group by making inside jokes and they did not profile themselves as one group to other groups or school staff. At the end of the project, group members told inside jokes, reacted against other groups, talked about their group in terms of "we" and emphasized the strengths and qualities of "their" group. For this indicator, a particular relationship could be found with the three categories 'discussion', 'task execution' and 'logistical discourse'. The shift from the limited to the moderate phase was particularly found in the discussion fragments. In the fragments of task execution and logistical discourse, the activities were all categorized in the limited phase of community, irrespective of the time frame of these fragments.

The other design principles seemed not to have an effect on the community level. To complete the picture, the indicators that did not show any development are discussed briefly.

The activities for the indicator *"commitment to domain"* were mainly categorized in the strong phase, both in the beginning and end of the project. The group members

perceived the task as valuable and relevant and they were all committed to the task at hand.

For *"multiple perspective contribution"* and *"intellectual building"* the activities were mainly scored in the moderate phase. The group welcomed each other's ideas, listened to each other and appreciated the contributions of each group member. However, they did not build further on each other's contributions, nor connect them.

For *"mutual trust and responsibility",* we had too few descriptions of the group's behaviour to make an accurate judgment on the development of this indicator.

For the indicators *"common ground", "collective goal"* and *"shared knowledge"* no consistent patterns were found. The activities were evenly categorized in the moderate and strong phase during the project.

3.4 Discussion and conclusion

This study focused on the development of a learning environment to stimulate community development in a group of student teachers, teachers, and an educator in a school-university partnership. To answer the main research question: *What design principles contribute to the development of communities of student teachers, teachers and supervisors in a school-university partnership?* we analysed which design principles were implemented and their effect on the community level of the group. We showed that there are indications that the learning environment to stimulate community development in a SUP afforded the following five principles: equivalent cooperation, obligation to contribute for all members, learning to know each other, reflecting on the collaboration and profiling the group as a unit. We will further discuss possible explanations for the effects found.

The feeling of equivalent cooperation played a central role in this group. After the teacher educator and student teachers expressed their discomfort about this concept, the idea of rotating the chairperson was introduced. This activity made the participants aware of their functioning and place in the group. As a result, they developed their identity as a group member, took on other roles as well, and improved the social atmosphere of the group.

The design principle concerned with activities to learn to know each other, also had an effect on the indicator "social ties". This rather seems logical as the group members learn the boundaries of each group member. However, the interesting part arises when the design principles are analysed which were aimed to improve the social atmosphere but were not implemented. Although no rules and norms were made explicit and the participants were not stimulated to improve their interpersonal and group skills, no conflict occurred. It could be questioned to what extent the student

teachers and teachers already have the necessary interpersonal and group skills to participate in a community.

Still, concerning equivalent cooperation, we think it is important to make a distinction between the formal role of an authority as leader and the spontaneous role of a group member as a leader based on his/her expertise. This is in equivalence with the concept of external and internal leadership of Wenger (1998), of which he says that "all communities of practice depends on internal leadership, but healthy communities do not depend on the leadership of one person" (2002, p. 36).

Design principle 6 and 11 on contribution to the products and goals, and reflection on the collaboration showed some similarities in their effect on *"regulation of interaction"* and *"dynamic effort".* The regulation shifted from teacher dominated regulation of interaction to group regulation. Similarly, group effort shifted from accepting differences in effort to equally dividing effort. Both indicators show an increasing commitment of the group, both in process and product. By stimulating reflection on the collaboration and discussion of the products, the teacher educator responded directly to the needs of the participants. As a consequence, it seemed that the perceived ownership of the project by the group members is stimulated. Participants took more responsibility for the success of the collaboration and the quality of the lesson plans. However, this interesting change in behaviour was not seen in the indicator "commitment 1 to domain". The implications of our results for this model are discussed in the next section.

Finally, we found that profiling the group contributed to the feeling of identification. We have to remark that the group members knew each other only from previous experiences but never had collaborated as a group. We have to consider the possibility that a growth in identification is a natural phenomenon when group members learn to know each other and have more experience in the collaboration. However, this group was very engaged in profiling themselves both internally and externally. Internal profiling consisted of profiling the group within meetings, emphasizing the relevance and importance of the collaboration. The group profiled themselves also as a group outside of the meetings, in conferences but also in statements to other groups within the school.

3.4.1 Community model

Although this model was found to be a useful method to describe community development, some remarks can be made. First, as said in the previous section, on the indicators "regulation of interaction" and "dynamic effort", only a change was noticed when looking at the qualitative analysis. Both indicators showed already at the start behaviour that could be categorized in the strong phase of the community. Additional-

ly, most indicators were scored in the moderate and strong phase which can imply that the three phases are not distinctive enough to describe the community development of a school-university partnership. Secondly, we found a change in teacher directed behaviour to group directed behaviour on both the regulation and dynamic effort indicators, representing an increase in commitment of the participants on both process and product. However, this did not seem to correspond to the pattern found on the indicator of commitment to domain. This could be related to the fact the indicators "regulation of interaction" and "dynamic effort" focus more on the process of collaboration, and the indicator "commitment to domain" is more concerned with the content of the collaboration. In contrast, within the dimension "shared interactional repertoire", we see that when the group started to regulate the interaction, role-taking was more distributed and dynamic effort was more equally divided. This can be explained in three ways: a) the indicators are related to each other, b) the design principle of rotating the chairperson influenced the three indicators separately; or c) rotating the chairperson influenced the three indicators through the mediating factor of an increase in responsibility for the collaboration process. Future research, therefore, should focus on the relationships within and between the dimensions, in which the independence of the different indicators is studied.

3.4.2 Design principles

The relatively high number of implemented design principles can be attributed to the flexibility of both the educator and to the model on which the design principles are based. As the teacher educator was an employee of both the teacher education institute and the school, it was rather easy to respond to the needs and goals of the different stakeholders. The same flexibility was granted by the Learning Together model of Johnson and Johnson (1999). Because the model does not prescribe fixed activities, the teacher educator was able to adjust to the needs of daily practice without endangering the implementation of the design principles. Some design principles were not implemented or partially implemented. Next we will discuss possible explanations.

Design principle 3 about discussion of the definition of important concepts was not implemented. This does not necessary mean that this design principle is not feasible at all; an alternative explanation could be that in this context, the teacher educator did not feel the necessity of implementing this design principle. The concepts in this case are used so frequently in the teaching profession that the definition of the concepts were clear to all participants. Another explanation could be that as this group was part of a SUP and the formal leader was a teacher educator, the group accepted the definitions used by the teacher education program.

The other design principles were only partially implemented. For example, for design principle 13 “Task interdependence is stimulated by providing the group with authentic tasks in which both the knowledge of student teachers and teachers is needed to accomplish the task”, the group received an authentic and meaningful task in eight meetings. However, the student teachers and teachers were only partnered three times at the beginning of the project because of the composition of the group.

Design principles 8, 9 and 10, focusing on interpersonal and group skills, and formulating norms and values, were also partly implemented. The educator stimulated the use of both basic and group skills by modelling in most meetings. However, the teacher educator was convinced that the strongest effect would be accomplished when the use of these skills were explicated when a conflict occurred. However, a conflict did not occur in any meeting, so the teacher educator did not have any material to explain the process of collaboration and the skills needed to contribute to this collaboration. As long as the collaboration process went well, the teacher educator did not see the necessity of intervening. As said before, as Johnson and Johnson see the interpersonal and group skills as a condition for collaborative learning, it could be questioned whether the student teachers and teachers already had the necessary interpersonal and group skills to participate in a community. In the previous chapter, we studied three post graduate teacher education programs in the Netherlands, in which we found that student teachers were not explicitly taught competences to participate in a community. However, it is possible that the student teachers already elaborated their interpersonal competences during undergraduate education. Alternatively, the possibility arises that other design principles contributed to their skills by the principle of learning by doing. For example, when implementing design principle 14, “goal interdependence is stimulated by negotiating shared goals and defining a common goal”, one can assume that by negotiating shared goals, community members elaborate on the skills of listening, summarizing, discussion and negotiation. In sum, it remains indecisive to what extent the participants in this study already possessed the necessary interpersonal skills or learned them implicitly during the project. Future research on teacher education should not only focus on the presence of the necessary community competences of student teachers, but also more clarification is needed on the relationship between interpersonal and group skills as defined by Johnson and Johnson and community skills needed to participate in a community.

In conclusion, this study focused on the development of a group as a community. The group we studied was a stereotype example of a school-university partnership or professional development school as described in the literature. Although we studied this group in depth for over a full school year, a major limitation of this research is the fact that we only studied one single group. Future research is needed on the generalizability of our results to other school-university partnerships which are less voluntary

or function with an educational perspective. Additionally, we used in this research the model of Johnson and Johnson as a source of inspiration to develop the design principles. It provided us with guidelines to stimulate collaborative learning within a community. However, caution is needed to understand the relationship between collaborative learning and community development. Furthermore, we did not study the effect of the community level on teacher or student teacher improvement in teaching and learning. A high community level does not necessarily mean that high performance on learning or teaching is reached. We suggest future research to focus on patterns of community level across indicators and dimensions, dependent on the task, goals, context and leadership of the SUP to improve learning outcomes of the community.

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Chapter 4

Fostering community development in school-university partnerships: the relationship between design principles and course aims

Teachers are expected to frequently collaborate within teacher communities in schools. This requires teacher education to prepare student teachers by developing the necessary community competence. School-university partnerships are considered a way of improving teacher education and to teach the student teachers to collaborate within communities. This study focuses on design principles to stimulate community development within a school-university partnership, focusing on the role of theme meetings and reflection meetings. Five design principles were considered to be feasibly implemented in school-university partnerships. Four of these design principles proved to be contributing to community development in theme and reflection meetings.

4.1 Introduction

Since the rise of Professional Development Schools started in 1990 by the Holmes group (1990), the need for robust school-university partnerships continues to be a pervasive theme in both teacher education literature and practice. Those partnerships focus on both the education of student teachers and the professional development of teachers (Castle, Fox & O'Hanlan Souder, 2006; Ridley, Hurwitz, Hackett & Miller, 2005). The success of such partnerships depends mainly on the collaboration process of the different stakeholders (Lefever-Davis, Johnson & Pearman, 2007). However, both schools and universities are loosely linked organizations with many internal subgroups, each with its own interests and resources. Therefore, Firestone and Fisler (2002) argue that "the focus on the relationship between the school and university is too simplistic to capture the complexities of partnership dynamics" (p.450). They suggest studying subunits within partnerships as pockets of professional communities to build a strong relationship between school and university.

In previous research on such subunits within a partnership we found that there are no straightforward ways to stimulate community development (Chapter 3). In a study into the effects of various design principles on fostering community development in a group of student teachers in the language education domain, we concluded that different design principles may be effective in the context of different course aims. In communities aiming at collegial coaching and reflection by student teachers there was a stronger development of identification with the group and social atmosphere than in communities dealing with task execution or logistical discourse. Groups working on collegial coaching and reflection flourish when the identity of the group is supported, members learn to respect each other's unique qualities, and roles are rotated within the group. Groups aiming at deepening understanding of common pedagogical themes of interest benefit from fostering the development of shared goals and from sharing resources, apart from stressing the equivalence of all members within the group. We acknowledged that further research was necessary to strengthen the empirical basis of these findings and conclusions, particularly by studying the effects of design principles for the start of community development in a group.

In this chapter we focus on the relationship between the aim of the community and design principles to stimulate community development. Wenger's (1998) community perspective was adopted to study the collaboration process of two communities of student teachers, teachers and a mentor teacher. We present a theoretical framework and a case study of two communities within a school-university partnership, working and learning together for a period of four months. Both groups performed

reflection meetings with the goal of collegial coaching as well as pedagogical theme meetings with the goal of deepening understanding. In this chapter, the concepts of reflection and theme meetings are further used referring to the goals of collegial coaching and deepening understanding respectively. For each type of course aim, the implementation and effect of specific design principles to stimulate community development might apply.

This study is part of a larger design-based research project with the goal to develop, implement and evaluate design principles to stimulate community development of such groups. In the next section, the community model by Admiraal, Lockhorst, and Van der Pol (2012) is described. This is followed by the theoretical framework on fostering community development with design principles.

4.1.1 Teacher communities

The community model of Admiraal, Lockhorst, and Van der Pol (2012) is based on the concept of communities of practice of Lave and Wenger (1991), which states that communities of practice promote competence development by combining a sense of joint enterprise, mutuality and a shared repertoire. A professional community is defined in this community model by three dimensions: as a group of professionals who are socially interdependent, who participate together in discussion and decision making, and share and build knowledge with respect to group identity, shared domain and aims, and shared interactional repertoire. *Group identity* is described as mutual engagement that binds teachers together in a social entity. *Shared domain* is defined as a joint enterprise as understood and continually negotiated by its members. *Shared interactional repertoire* is characterized by a shared practice and beliefs on how members in a group interact. These three dimensions consist of 19 indicators (see Table 4.1). For example, the indicator Multiple perspective contribution is defined as: "There is room for multiple perspectives in members' contributions to the community, and members value these perspectives". Common ground refers to "the level in which there is a mutual understanding of central concepts". Role taking is defined as: "Members actively take up roles (tasks, positions) and accept these from each other" (Admiraal, Lockhorst, & Van der Pol, 2012).

To characterize quality of the community processes three markers are distinguished on all indicators:

- Limited: the community processes are characterized by indications of limited group identity, feeling and some degree of shared patterns, procedures and willingness to be active in the domain.

- Moderate: the community processes are characterized by consciousness of the group identity and development of collective activities.
- Strong: the community processes are balanced, shared and focused on a shared domain and feelings of group identity.

Table 4.1: Dimensions and Indicators of Admiraal, Lockhorst, and Van der Pol's (2012 Community Model

Dimensions of the community model	Indicators
1. Group identity	1.1 Identification
	1.2 Multiple perspective contribution
	1.3 Mutual trust and responsibility
	1.4 Social ties
	1.5 Emotional safety
	1.6 Spiritual bond
	1.7 Sense of collectivism
	1.8 Neighbourliness
	1.9 Co-worker support
2. Shared domain	2.1 Commitment to domain
	2.2 Common ground
	2.3 Collective goal
	2.4 Shared knowledge
3. Shared interactional repertoire	3.1 Intellectual building
	3.2 Regulation of interaction
	3.3 Role taking
	3.4 Dynamic effort
	3.5 Dynamic position
	3.6 Interactional norms

4.1.2 Fostering Community Development

This study is part of a design-based research project consisting of two cycles of design, implementation, and evaluation of Principles for Community Development. For the first design cycle, 14 design principles were identified (Chapter 3), based on the Learning Together Model of Johnson and Johnson (1999). The results of that study showed that five of the implemented principles were related to the process of community development. Indications were found that the effect of these design principles was

different for different types of community activities. For a further understanding of these relations between design principles, community activities and community development this study is focused on the feasibility and effectiveness of design principles to foster teacher communities in meetings with different aims and activities. Two types of activities are specifically relevant and frequently found in teacher communities within school-university partnerships (Chapter 3):

1. Community activities in which students should learn from each other by exchanging experiences and reflecting on these experiences. In these activities aspects concerning the process of community development such as group identity and shared interactional repertoire are expected to be more important than aspects related to shared domain.
2. Community activities in which students should discuss pedagogical themes. Here an emphasis on reaching a shared domain is expected to be more successful.

The five design principles that were chosen for this study are shown in Table 4.2. The first three design principles were chosen because they appeared to have a relationship with indicators that are important in reflection meetings (Chapter 3). The other two design principles were included as they are expected to be related to developing a shared domain and to be important in group activities to deepen understanding of pedagogical themes.

Table 4.2: Five Design Principles, their Assumed Effects and Relevance with Respect to Two Types of Course Aims

Design principles	Expected effect on indicator	Expected effect on dimension	Course aim
1. Group identity is stimulated by profiling the group as a unit.	Identification	Group identity	Reflection meeting
2. The group learns to know each other's qualities, expectations and concerns and is stimulated to take these into account.	Social ties	Group identity	Reflection meeting
3. It is emphasized that everyone is equivalent so that all group members can learn from each other and help each other reach the groups' goals.	Social ties Role taking	Group identity and Shared interactional repertoire	Reflection meeting + theme meeting

Design principles	Expected effect on indicator	Expected effect on dimension	Course aim
4. Goal interdependence is stimulated by negotiating shared goals and defining a common goal.	Collective goal Commitment to domain	Shared domain	Theme meeting
5. Group members are stimulated to exchange resources.	Shared knowledge	Shared domain	Theme meeting

In short, communities in school-university partnerships can choose various aims, and, consequently, have to arrange various activities to achieve the course aims chosen. To stimulate the development of communities, the course aims for these communities should be taken into account when choosing design principles for the development of communities and the related learning activities for the student teachers and the (teaching) activities of mentor teachers. Regarding the limited information available on fostering the development of teachers' communities, the research question in this study is:

Which design principles contribute to community development of student teachers in school-institute partnerships in either reflection meetings or theme meetings?

This involves two sub questions:

1. *Feasibility*: Which design principles for the development of teacher communities are feasible for implementation in either reflection or theme meetings?
2. *Expected result*: Which design principles for development of teacher communities are effective when implemented in either reflection or theme meetings?

4.1.3 Research approach in this study

This study describes the process of community development in two student teacher communities within a school-university partnership. In 2009 the school-university partnership started as a pilot project, in which four secondary public schools and one teacher education institute participated. The teacher education program consisted of a four-year program in which student teachers followed institutional courses for three or four days a week and were interns during the other one or two days. During this internship, the student teachers met in groups with a teacher mentor for each group. Two groups of student teachers and a mentor teacher in two different schools were studied for a period of four months. One group consisted of seven first-year student

teachers, the other of eight second-year student teachers. The groups followed the same curriculum, as provided by the teacher education institute. Both groups had two types of meetings during these four months. In the *reflection meetings*, the student teachers exchanged experiences with each other and reflected on their professional behaviour. In the *theme meetings*, the group tackled a pedagogical subject based on an assignment provided by the mentor teacher.

In order to answer the research questions, the implementation and effects of five design principles for community development were studied by video recording and analysing two theme meetings and two reflection meetings of both groups. The video recordings were transcribed. The implementation of the five design principles was analysed by developing a Checklist Implementation Design Principles. All activities referring to each of the principles in each of the theme meetings and reflection meetings were coded and categorized. The level of community quality was coded with the Community Development Protocol (Admiraal, Lockhorst, & Van der Pol, 2012). Finally, the level of community quality was related to the level of implementation of the five design principles for both the theme meetings and reflection meetings.

4.2 Method

4.2.1 Participants

A teacher education institute of a university of applied sciences in the Netherlands was willing to participate in this research project. The teacher education institute hosts programs for both primary school teachers and secondary school teachers. The department educating secondary school teachers formed a school-university partnership with four secondary schools located nearby. Four mentor teachers of these schools mentored five groups of first-year and second-year student teachers. Two of the four mentor teachers were selected based on their experience in mentoring and an evaluation of the first meetings of the four teachers and the five groups of student teachers. Both mentor teachers were female and had 15 and 20 years of teaching experience. They participated on a voluntary basis and received no additional remuneration for joining the project.

Group A consisted of seven first year student teachers and group B consisted of eight second year student teachers. These student teachers were preparing for a teaching degree in a specific school subject. In the group of first-year student teachers, the subjects the students had chosen were English, Biology, Geography, Economics and Dutch Language. The second-year student teachers had chosen Biology, English, History, Dutch Language, Geography and Art Education. The students were between

17 and 25 years of age. All students were enrolled in a full-time four year bachelor program. Both the first- and the second-year students participated in a school-university partnership community for the first time. All students participated on a voluntary basis in the project and received no rewards.

4.2.2 Setting

Both groups followed the same curriculum, provided by the teacher education institute. The groups tackled two main subjects during theme meetings and reflection meetings. In one week, the groups were supposed to tackle a pedagogical subject based on an assignment of the mentor teacher. The other week, the students exchanged experiences with each other and reflected on their behaviour. For each group, four meetings were selected for data collection and analysis: the first and the last reflection meeting of the four months' period and the first and the last theme meeting. Two feedback and theme meetings were randomly selected for development of the instruments and checking the interrater reliability.

During the reflection meeting, the incident method was used (Bijkerk & Van der Heijden, 2006). This procedure consists of five main phases. In the first phase, a student teacher brings in an incident he encountered in his practice. The student teacher introduces a situation and describes the problem until the critical moment in which he or she took action. In the second phase, the group members ask the student teacher questions to gain insight into the problem. The third phase involves a description of the situation by the other group members. The group members discuss their vision on the situation and talk about possible causes and motives. In the fourth phase, the group members tell the student teacher what they would have done in this situation. Finally, in the last phase, the student teacher tells the group how he reacted on this incident. His or her actions are evaluated and the new insights of the other group members are discussed.

The theme meetings were arranged according to a specific pedagogy-related assignment prepared by the mentor teacher. The mentor teacher delivered the assignment; the student teachers worked in small groups to discuss the issue and the results were presented in the whole group.

4.2.3 Intervention

Five design principles were implemented in co-design with the mentor teachers according to the communicative design paradigm (Visscher-Voerman & Gustafson, 2004). Within this paradigm, the focus is on consensus between all stakeholders concerning the problem to be solved and possible solutions for the problem. Before the project

started, the mentor teacher and researcher met two times to discuss the design principles and to develop activities. Possible activities were proposed by the researcher, based on previous research. This list of activities was discussed and adapted to the situation of the mentor teacher. Additionally, the mentor teachers suggested other activities they used already. The list of activities is found in Table 4.3. The mentor teacher was responsible for the implementation of the activities, while the researcher monitored the implementation of the design principles.

4.2.4 Instruments, data sources and analysis

Checklist Implementation Design Principles. The list of activities (Table 4.3) was used as a checklist to record the implementation of a particular design principle. Transcriptions were made of the videos of the eight meetings, and the activities were checked with yes or no, based on the utterances of the mentor teacher. A design principle was considered to be implemented when two or more activities related to that design principle were executed; it was considered to be not implemented when none or only one activity was observed. Four fragments of video tapes were coded by a second observer. There was 84% agreement and the interrater reliability of the scoring of the checklist was .68 (Cohen's Kappa, 1992). The two raters discussed the differences until full agreement was reached.

Community Quality Observation Protocol. To measure the level of community development, the videotapes were analysed according to the community model of Admiraal, Lockhorst, and Van der Pol (2012; Table 3). The observation protocol was a high inference observation measurement, as the incidence of specific behaviour is in itself not informative about the quality of that behaviour. Each videotape was first observed by one of the researchers to become acquainted with the activities and personalities of the group. The most salient behaviours were recorded and categorized according to the indicators from the community model. For each videotape, a description was made of all activities of the group, categorized in the 13 observable indicators of the community model, as described above. Next, each meeting was observed again for each dimension separately, looking for less obvious activities referring to the indicators of that dimension. This resulted in thick descriptions of the behaviour of the group, including both verbal utterances and non-verbal gestures. Based on the qualitative descriptions, it was determined for each indicator whether it corresponded to the limited, moderate or strong community quality level. To establish reliability and validity, this measurement instrument was used by the first author of this paper and three other researchers of the research project team. In three cycles of independent rating and subsequent discussion, fragments of each meeting were scored on community

quality level until full agreement was reached. This procedure was considered to be sufficiently reliable.

Effect of the design principle on community development. To answer research question 2 which design principles are effective to stimulate community development, we defined an effect to occur when the level of community development increased, stayed at the strong level or increased in the first meeting towards a moderate or strong level, under the condition that this effect is found at least two times per type of meeting.

Table 4.3: Operationalization of Five Design Principles in Activities of the Mentor Teacher

Design principles	Activities
1. Group identity is stimulated by profiling the group as a unit.	The mentor teacher models the group feeling by referring to the group as 'we'. The mentor teacher defines the subject of the meetings together with the student teachers.
2. The group learns to know each other's qualities, expectations and concerns and is stimulated to take these into account.	Expectations are made clear on a regular base. The mentor teacher invites the student teachers for a social talk. The mentor teacher gives room to discuss urgent problems at the start of the meeting. The mentor teacher shows empathy and interest in issues not related to the reflection meeting but important for the group. The mentor teacher monitors the collaboration process and intervenes when difficulties between group members arise. The mentor teacher asks the group to give feedback on the collaboration.
3. It is emphasized that everyone is equivalent so that all group members can learn from each other and help each other reach the groups' goals.	The mentor teacher explicitly states that the participants should treat each other as equal learners and models this behaviour. The role of chairperson changes between meetings. The mentor teacher states that the group members need each other to successfully end this internship.
4. Goal interdependence is stimulated by negotiating shared goals and defining a common goal.	In the first meeting, the individual goals are listed and shared goals are defined. On a regular basis these goals are evaluated and adapted. The mentor teacher invites the student teachers to explicate their needs and takes action upon this.
5. Group members are stimulated to exchange resources.	The mentor teacher asks the students about their vision on the pedagogical problem. The student teachers write a rapport on the meeting to use later as a knowledge base. The mentor teacher stimulates the student teachers to relate theory with practice.

4.3 Results

In this section first the implementation of the design principles and community development of both communities in the reflection meetings are reported. Then, the implementation of the design principles and community development in the theme meetings are discussed.

4.3.1 Reflection meetings: Implementation of design principles 1, 2 and 3 in reflection meetings of community A and B

4.3.1.1 Community A

In the *first reflection meeting,* different activities related to the first three design principles were found. Regarding design principle 1, the mentor teacher regularly used the We-voice to refer to the unity of the group. She defined the subject of the group by asking whether it is OK to start with reflection and which students have an experience to discuss. Therefore, we consider design principle 1 to be implemented.

Regarding design principle 2, the mentor teacher clarified the goals of reflection and explained the expectations she has of the student teachers. The group was intensively involved in the process of reflection and the mentor teacher did not invite the students for a social talk, nor showed interest in other issues. She monitored the collaboration process and intervened when the student teachers deviated from the reflection process. However, in this meeting she did not ask student teachers for feedback on the collaboration process. As two of the suggested activities were applied, we consider design principle 2 was implemented.

Regarding design principle 3, the mentor teacher did not explicitly state that every group member is equal but she modelled equivalence behaviour by inviting everyone to contribute to the group process. In this meeting the mentor teacher was the chairperson but the role of the secretary changed. The mentor teacher did not explicitly state that group members needed each other but she explained that the group members can learn from each other. Therefore, design principle 3 was implemented.

In the *second reflection meeting*, the mentor teacher did not contribute a lot in the discussion. The contributions she made were mainly asking questions on the content of the problem. Regarding design principle 1, she used the We-voice only once while asking whether it was OK for the students to continue the meeting with a reflection trial. We consider design principle 1 as not implemented.

Concerning design principle 2, there was no evidence of any activity at all. She did not clarify expectation, nor invited the students for a social talk. She did not discuss urgent problems and no issues were raised which were not related to the meeting. Finally, she did not ask feedback on the collaboration process and it is hard to say

whether she monitored the collaboration process and intervened when difficulties arose because there were no difficulties and she did not intervene. Therefore, design principle 2 was not implemented.

Activities corresponding to design principle 3 were observed only when she reminded the student teachers to appoint a chairperson and secretary. She did not state or model that all group members were equal or needed each other. Design principle 3 was not implemented.

4.3.1.2 Community B

In the *first reflection meeting*, design principle 1 and 2 were implemented.

Regarding design principle 1, the mentor teacher used the We-voice to model the group feelings and asked the student teachers about the subject of the meeting and the way they were going to work. Design principle 1 was implemented.

Regarding design principle 2, the mentor teacher clarified expectations by explaining what the goal of the meeting was. Additionally, she invited the student teachers for a social talk and showed interest to discuss whether there were issues not related to the meeting. However, there were no instances that she monitored the collaboration process and intervened when necessary, nor did she ask the student teachers for feedback on the collaboration process. Design principle 2 was considered to be implemented.

Concerning design principle 3, the mentor teacher did not formulate any statement about the equity of the participants. In the whole meeting she played the role of chairperson. She only modelled the behaviour that everyone is equal by contributing to the reflection process at the same level as the student teachers and by giving them all the chance to contribute to the process. Design principle 3 was not implemented in the first reflection meeting.

In the *second reflection meeting*, none of the design principles were implemented. Regarding design principle 1, the mentor teacher used actively the We-voice to model the group feeling. There was no negotiation on the subject in this meeting because of the fact that this meeting was concerned with video reflection and it was decided upon in a previous meeting which student teacher was showing a video fragment.

Regarding design principle 2, the mentor teacher did mentor the collaboration process and intervened when the student teacher who was the object of reflection felt herself attacked by the feedback of the other students. Because the students already had experience with this kind of reflection, expectations were not clarified. Additionally, there was no room for other issues to discuss.

Design principle 3 was not implemented either in this meeting. The mentor teacher was holding the reins and did not make any statement about the equity of the

group members. She models the behaviour that everyone is equal by making sure that every student teacher had the chance to give feedback. However, she did not make any statements about the equity of the group members or whether student teachers need each other in this internship.

The implementation of the design principles in the reflection meetings for both communities is summarized in Table 4.4.

Table 4.4: Overview of the Implementation of the Design principles for Community A and B in the Reflection Meetings; X = activity was implemented

		Community A		Community B	
Design principle	Activities	Reflection meeting 1	Reflection meeting 2	Reflection meeting 1	Reflection meeting 2
1. Identity inter-dependence is stimulated by profil-ing the group as a unit.	1.1. The mentor teacher models the group feeling by referring to the group as 'we'.	X		X	X
	1.2. The mentor teacher defines the subject of the meet-ings together with the student teachers.	X		X	
2. The group learns to know each other's qualities, expectations and concerns and is stimulated to take these into account.	2.1. The mentor teacher clarifies expectations.	X		X	
	2.2. The mentor teacher invites the student teachers for a social talk.			X	
	2.3. The mentor teacher shows empa-thy and interest in issues not related to the project but important for the group.			X	
	2.4. The mentor teacher monitors the collaboration process and intervenes when difficulties between group members arise.	X	X		X

Design principle	Activities	Community A		Community B	
		Reflection meeting 1	Reflection meeting 2	Reflection meeting 1	Reflection meeting 2
	2.5. The mentor teacher asks the group to give feedback on the collaboration.				
3. It is emphasized that everyone is equivalent so that all group members can learn from each other and help each other reach the groups' goals.	3.1. The mentor teacher explicitly states that the participants should treat each other as equal learners.				
	3.2. The mentor teacher models the behaviour that everyone is equal.	X		X	X
	3.3. The role of chairperson and secretary changes between meetings.	X	X		
	3.4. The mentor teacher states that the group members need each other to successfully end this internship.	X			

4.3.2 Quality of the community in the reflection meetings of both community A and B

4.3.2.1 Community A

The level of the community quality was analysed using three indicators: identification, social ties, and role taking (see Table 4.2). In the first meeting, the level of Identification is considered moderate. Group members were passive in using the We-voice, but they seemed to identify with the group. There was a strong positive atmosphere (Social ties) and Role taking. Several jokes were made by different group members and role taking was distributed and accepted by the group. In the second meeting identification with the group was limited. Group members used mainly the I-voice. The social atmosphere was also friendly (Social ties). Role taking was distributed but not accepted by all group members.

4.3.2.2 Community B

Regarding the quality of community of the first reflection meeting, the level of indicator identification with the group was limited. The group showed a passive I-voice. This seemed inherent to the way the mentor teacher shaped the reflection meeting in which each member was supposed to give feedback on the incident separately. The social atmosphere was neutral and formal; almost no jokes were made. Role taking was not distributed. The mentor teacher was the chairperson of the group and asked questions to the student teachers. In the second reflection meeting, regarding the indicator identification, there was a passive We-voice. Group members referred to each other as the group, although they did not use the We-voice explicitly. The social atmosphere shifted during the meeting. In this meeting, two student teachers introduced a situation to reflect on. One of the student teachers received a lot of critics and reacted very defensive towards the remarks of the group. When solutions for the problem of this student teacher were discussed, the atmosphere developed again to a positive level. Role taking was not used. The mentor teacher presented herself as the chairperson and the expert in this meeting. This role was accepted by the student teachers.

The findings on the implementation of the design principles and the quality of the communities in the reflection meetings in both communities can now be brought together. Table 4.5 gives an overview of the findings on the design principles 1, 2 and 3 in the reflection meetings.

In the first meeting of community A all design principles were implemented and in the second meeting none. The quality of community A in these meetings was strong for the indicators Social ties and Role taking; the level of Identification changed from moderate to limited.

In the first meeting of community B design principles 1 and 2 were implemented and in the second meeting none. The quality of community B in the meetings changed for the indicator Identification from limited to moderate; for Social ties from moderate to strong; the level of Role taking was moderate in both meetings.

Table 4.5: Overview of the Findings on the Design Principles and the Quality of Community A and B in the *Reflection* Meetings

	Design Principle 1 Identity interdependence is stimulated by profiling the group as a unit	Design Principle 2 The group learns to know each other's qualities, expectations and concerns and is stimulated to take these into account	Design Principle 3 It is emphasized that everyone is equivalent so that all group members can learn from each other and help each other reach the groups' goals
Implemented in meeting A1?	Yes	Yes	Yes
Quality of the community?	Identification Moderate	Social ties Strong	Social ties Strong Role-taking Strong
Implemented in meeting A2?	No	No	No
Quality of the community?	Identification Limited	Social ties Strong	Social ties Strong Role-taking Strong:
Implemented in meeting B1?	Yes	Yes	No
Quality of the community?	Identification Limited	Social ties Moderate	Social ties Moderate Role-taking Moderate
Implemented in meeting B2?	No	No	No
Quality of the community?	Identification Moderate	Social ties Strong	Social ties Strong Role-taking Moderate

4.3.3 Theme meetings: Implementation of design principles 3, 4 and 5 in theme meetings of community A and B

In the *theme meetings*, different activities related to the design principles 3, 4 and 5 were observed and analysed. An overview of the findings is given in Table 4.6.

4.3.3.1 Community A

In the *first theme meeting* the mentor teacher did not state explicitly that group members are equal or need each other to successfully complete their internship. However, she treats the student teachers as equal by thanking them for the possibility of discussing a subject the mentor teacher had difficulties with and by asking them to contribute

in an equal manner. Also the role of chairperson and secretary changed within the meeting. In this way, design principle 3 is implemented.

Concerning design principle 4 about group goals, the mentor teacher provided the opportunity to discuss and evaluate individual and collective goals and to adapt the collective goal by asking student teachers whether the content of the meeting helped them to reach their goals. Related to this, the mentor teacher also asked student teachers to make their needs explicit by asking them what they want and how they think the meeting should contribute to what they want. Accordingly, design principle 4 is considered to be implemented.

Regarding design principle 5, in this meeting only one activity was observed in the behaviour of the mentor teacher. The mentor teacher asked the students about their vision on the pedagogical problem; more specifically, they asked the student teachers which boundaries they have in their contact with pupils. The student teachers did not have to write a report for the knowledge base or exchange resources. In this meeting, the theoretical background of the problem was not explained. The student teachers were referred to a book in which theoretical considerations were discussed. Although the student teachers were asked several times to give their pedagogical view on the subject of distance-proximity, there evolved no discussion. Design principle 5 is considered to be not implemented.

In the s*econd theme meeting*, the mentor teacher did not explicitly state that the participants should treat each other as equal learners, nor that the group members need each other to successfully end this internship. However, she models this behaviour by giving the student teachers a task in which the student teachers have to read different types of materials and teach each other the theme in pairs of two. Additionally, she models the behaviour that everyone is equal by explaining to a student teacher that she has no straightforward answers to his questions because it depends on his own preferences. The mentor teacher is also the chairperson of this theme and holds this role during the whole meeting. We concluded that design principle 3 is not implemented.

Principle 4 is implemented in this meeting. Goals are evaluated and adapted and the mentor teacher invites the student teachers to explicate their needs. In this meeting, she asked the student teachers whether they were OK with the way she wants to discuss the theme, and asked what the student teachers needed to accomplish the task which was related to the theme. Design principle 4 is considered to be implemented.

Concerning design principle 5, the mentor teacher asked the students about their vision on the theme and to write a report on the meeting. Additionally she stimulated the student teachers to relate theory with practice by asking them to search for a

problem they were encountering in daily live and formulating it according to the theory used in the meeting. We consider design principle 5 to be also implemented.

4.3.3.2 Community B

During the *first theme meeting* design principle 3 was implemented. The mentor teacher did not state that everyone is equal, nor that they needed each other to successfully complete their internship. However, she modelled this behaviour by giving every group member the chance to contribute to the theme discussion. Also, the role of secretary changed during and between meetings.

Concerning design principle 4, only one activity was implemented, when the mentor teacher asked the student teachers to express their needs before the theme discussion started. Therefore, design principle 4 is considered not to be implemented.

Concerning design principle 5, the mentor teacher asked the student teachers about their vision on the problem, to write a report, and to relate the theory of reflection on the issues they encounter in daily life. She also proposes to use the school system of portfolio such that the student teachers can share their portfolios with each other. Accordingly, design principle 5 was implemented in this meeting.

In the *second theme meeting*, only design principle 5 was implemented. Concerning design principle 3, the mentor teacher only modelled equity behaviour by giving each student teacher the chance to contribute and by showing some examples of her own practice. She did not make any statements on equity or necessity of group members to help each other and she kept the role of chairperson. In this meeting, the mentor teacher forgot to appoint someone to take notes. Later on a student teacher did notice this and proposed to write down the notes in retrospection.

Design principle 4 was not implemented; goals and needs were not discussed.

Concerning design principle 5, the mentor teacher asked the students about their ideas concerning learning styles and how they could relate their learning styles with the contact they had with their supervisor. Additionally, a student teacher made a report of the meeting and the mentor teacher made a reference to the usability of the report, and how it should be set up. Design principle 5 was also implemented.

Table 4.6: Overview of the Implementation of the Design Principles for Community A and B in the *Theme* Meetings; X = activity was implemented

		Community A		Community B	
Design principle	Activities	Theme meeting 1	Theme meeting 2	Theme meeting 1	Theme meeting 2
3. It is emphasized that everyone is equivalent so that all group members can learn from each other and help each other reach the groups' goals.	3.1. The mentor teacher explicitly states that the participants should treat each other as equal learners.				
	3.2. The mentor teacher models the behaviour that everyone is equal.	X	X	X	X
	3.3. The role of chairperson and secretary changes within meetings.	X		X	
	3.4. The mentor teacher states that the group members need each other to successfully end this internship.				
4. Goal interdependence is stimulated by negotiating shared goals and defining a common goal.	4.1. Goals are evaluated and adapted.	X	X		
	4.2. The mentor teacher invites the student teachers to explicate their needs and takes action upon this.	X	X	X	
5. Group members are stimulated to exchange resources.	5.1. The mentor teacher asks the students about their vision on the pedagogical problem.	X	X	X	X
	5.2. The student teachers write a rapport on the meeting.		X	X	X
	5.3. The mentor teacher stimulates the student teachers to relate theory with practice.		X	X	X
	5.4. The mentor teacher refers to this rapport				X
	5.5. The mentor teacher stimulates the student teachers to exchange			X	

Design principle	Activities	Community A		Community B	
		Theme meeting 1	Theme meeting 2	Theme meeting 1	Theme meeting 2
	resources such as documents and portfolios after the meeting.				

4.3.4 Quality of the community in the theme meetings

Effects of the implemented design principles on the level of the community quality were expected and are reported on five indicators: Social ties, Role taking, Collective goal, Commitment to domain and Shared knowledge (see Table 4.2).

4.3.4.1 Community A

In the *first theme meeting*, the social atmosphere was friendly but some tension was felt between two group members. Role taking was not distributed; the mentor teacher took the lead as chairperson and expert. This was accepted by the student teachers. The group was committed to the topic at hand. All group members are involved in the discussion of the topic 'advantages and disadvantages of a classroom discussion'. The group members had a collective goal as to decide the ideal distance between teacher and pupil. Concerning shared knowledge, most of the time opinions were exchanged. The mentor teacher had brought some articles and books but these were not used in the discussion.

In the *second theme meeting*, there was also a tension between two group members, but the social atmosphere was friendly in general. At the end of the meeting, one student teacher started with a game to improve the atmosphere. The role taking was distributed; each group member interchangeably took up the role of presenter of a research problem and discussant. The group members were committed to the theme of action research, although sometimes group members tried to change the subject. Although the goal of this meeting was to discuss the concept of 'the teacher as an action researcher', the group members did not show behaviour referring to a collective goal. The individual goals were also not made explicit. This could be inherent to the situation that the theme of action research was meant to be discussed in the context of a teacher as a lifelong learner. However, the teacher education institute also related a specific research assignment to this subject. As a consequence, the group mainly focused on the research question and methods of each student individually. Concern-

ing shared knowledge, mostly experiences and opinions are exchanged. Knowledge was not constructed or used within this meeting.

4.3.4.2 Community B

In the *first theme meeting*, the social atmosphere was open, safe and very friendly. The mentor teacher took up the role of chairperson and expert. This was accepted by the student teachers. The commitment of the group members changed during the meeting. In the beginning the student teachers were involved with the subject but some students were simultaneously discussing about the subject and writing in their journals. They did not show any behaviour referring to a collective goal. It seemed that they perceived the discussion as an individual task and not as a common endeavour. Knowledge is not created in this meeting although the mentor teacher exchanged her knowledge with the student teachers.

In the *second theme meeting*, the atmosphere was more neutral and formal. Also in this meeting, the mentor teacher took up the role of expert and chairperson and this was accepted by the student teachers. They seemed to be involved with the subject of this meeting. However, little interaction occurred between the student teachers so they were not committed to the group. The goal was not explained in this meeting, nor discussed with group members. The mentor teacher explained the shared knowledge to the student teachers. The student teachers used this knowledge to apply it on their practice.

The findings on the implementation of the design principles and the quality of the communities in the theme meetings in both communities can now be brought together. Table 4.7 gives an overview of the findings on the design principles 3, 4 and 5 in the theme meetings.

In the first meeting of community A design principles 3 and 4 were implemented and in the second meeting 4 and 5. The quality of community A in these meetings is strong for the indicator Commitment to domain and moderate for Social ties and Shared knowledge; the quality changed for Role taking from moderate to strong, and for Collective goal from moderate to limited.

In the first meeting of community B design principles 3 and 5 were implemented and in the second meeting design principle 5. The quality of community B in the meetings is moderate for the indicators Commitment to domain and Role taking; it changed for Social ties from strong to moderate and for Shared knowledge from limited to moderate.

Table 4.7: Overview of the Findings on the Design Principles and the Quality of Community A and B in the *Theme* Meetings

	Design Principle 3. It is emphasized that everyone is equivalent so that all group members can learn from each other and help each other reach the groups' goals	Design Principle 4. Goal interdependence is stimulated by negotiating shared goals and defining a common goal	Design Principle 5. Group members are stimulated to exchange resources
Implemented in meeting A1?	Yes	Yes	No
Quality of the community?	Social ties Moderate Role-taking Moderate	Commitment to domain Strong Collective goal Moderate	Shared knowledge Moderate
Implemented in meeting A2?	No	Yes	Yes
Quality of the community	Social ties Moderate Role-taking Strong	Commitment to domain Strong Collective goal Limited	Shared knowledge Moderate
Implemented in meeting B1?	Yes	No	Yes
Quality of the community?	Social ties Strong Role-taking Moderate	Commitment to domain Moderate Collective goal Limited	Shared knowledge Limited
Implemented in meeting B2?	No	No	Yes
Quality of the community?	Social ties Moderate Role-taking Moderate	Commitment to domain Moderate Collective goal Moderate	Shared knowledge Moderate

4.4 Discussion and conclusion

This study focused on the following research question: Which design principles contribute to community development in either reflection meetings or theme meetings of student teachers in school-institute partnerships? This involves two sub questions:

1. *Feasibility*: Which design principles for the development of teacher communities are feasible for implementation in either reflection or theme meetings?

2. *Expected result*: Which design principles for development of teacher communities are effective when implemented in either reflection or theme meetings?

The *first sub question on the feasibility* of the design principles for community development can now be answered for the five design principles that were chosen for this study. First the three design principles that were implemented in the meetings that aimed at reflection (see Table 4.5). Subsequently, the feasibility of the three design principles for the theme meetings is discussed.

Design principle 1: Identity interdependence is stimulated by profiling the group as a unit. This design principle was implemented in the first reflection meeting of both groups. Interestingly, however, it was not implemented in the last meeting of both groups. This can be rather well understood in the perspective that the group then had been meeting for many weeks and activities to further stimulate the group as a unit were less relevant.

Design principle 2: The group learns to know each other's qualities, expectations and concerns and is stimulated to take these into account. This design principle was also implemented in the first meeting, and not implemented in the last meeting of both groups. This can also be well understood in the perspective that the group then had been meeting many times, so learning to know each other's qualities was less relevant.

Design principle 3: It is emphasized that everyone is equivalent so that all group members can learn from each other and help each other reach the group goals. This design principle was only implemented in the first meeting of group A. In group B the mentor teacher did not formulate any statement about the equity of the participants, although she modelled the behaviour that everyone is equal by contributing to the reflection process at the same level as the student teachers and by giving them all the chance to contribute to the process. In the meetings she played the role of chairperson and did not show other activities to implement this design principle. Design principle 3 is also involved in the next discussion on design principles for theme meetings.

Regarding *the feasibility* of the design principles for community development we found no reasons to conclude that any of the design principles 1, 2 and 3 is not feasible. In the first meetings all (community A) and two of the three (community B) were implemented. However, in the last meetings none of the design principles was implemented. In the discussion we come back to this issue.

The first sub question on the feasibility of the design principles for community development can also be answered for the design principles for the *theme meetings*. The

findings on three design principles that were implemented in these meetings are now discussed (see Table 4.7).

Design principle 3: It is emphasized that everyone is equivalent so that all group members can learn from each other and help each other reach the groups' goals. This design principle was implemented in the first theme meeting of both groups. However, it was not implemented in the last meeting of both groups. This can be rather well understood in the perspective that the group then had been meeting for many weeks and activities to further stimulate the group as a unit were less relevant.

Design principle 4: Goal interdependence is stimulated by negotiating shared goals and defining a common goal. This design principle was only implemented in the meetings of group A. In group B the goals and needs were not discussed, only in the first meeting mentor teacher B did ask the students to express their needs before the theme discussion started. In the meetings she played the role of chairperson.

Design principle 5: Group members are stimulated to exchange resources. This design principle was implemented in both meetings of group B, and in the last meeting of group A. Considering the details in the description of what happened in the first meeting of group A, for the students it was difficult at that moment to provide input on the theme of distance-proximity that was discussed. However, the mentor teacher did not stimulate the students to exchange their experiences and she herself did not provide her own experiences.

Regarding *the feasibility* of the design principles for community development we found no reasons to conclude that any of the design principles 3, 4 and 5 is not feasible. In the first meetings all were implemented (3 and 4 for Community A; 3 and 5 for Community B). In the last meetings design principles 4 and 5 were implemented for Community A, and principle 5 for Community B.

The *second sub question* regards the *expected result*: Which design principles for development of teacher communities are effective when implemented in either reflection or theme meetings? A summary of the findings is presented in Table 4.5 and 4.7, which will now be discussed. This sub question can now be answered for the five design principles that were chosen for this study. First the three design principles are discussed that were implemented in the meetings that aimed at reflecting on experiences (see Table 4.5). Subsequently, the effectiveness of the three design principles for the theme meetings is discussed.

Design principle 1: Identity interdependence is stimulated by profiling the group as a unit. This design principle was implemented in the first reflection meeting of both groups. The indicator identification was found to be moderate and limited in those meetings. In the last meeting identification was found to be limited for group A and

moderate for group B. These findings give no clear indication about the effect of this design principle in the reflection meetings.

Design principle 2: The group learns to know each other's qualities, expectations and concerns and is stimulated to take these into account. When this design principle was implemented in the first meeting of both groups, the indicator Social ties was found to be strong (group A) and moderate (group B). However, although it was not implemented in the final meetings, the indicator was strong for both groups. This gives an indication that this design principle was effective in the perspective that the group had met for many weeks which made activities to further stimulate social ties in the last meeting not relevant.

This indicator is also related to design principle 3 that now will be discussed.

Design principle 3: It is emphasized that everyone is equivalent so that all group members can learn from each other and help each other reach the groups' goals. This design principle was only implemented in the first meeting of group A where the indicator Social ties showed to be strong. In the last meeting Social ties also appeared to be strong for both groups, indicating that the final result on social ties was strong, but that this could not be related to design principle 2 or 3.

This design principle was also intended to have an effect on the indicator Role taking. When implemented (in reflection meeting A1) Role taking was strong, when not implemented (in the other meetings A2, B1 and B2) Role taking was strong, moderate and moderate. These findings give no clear indication of the effect of this design principle on the indicator role-taking. Design principle 3 is also involved in the next discussion on design principles for theme meetings.

The sub question on the expected results of design principles 3, 4, and 5 for community development can now also be answered for the design principles for the *theme meetings* (see Table 4.7).

Design principle 3: It is emphasized that everyone is equivalent so that all group members can learn from each other and help each other reach the groups' goals. This design principle was implemented in the first theme meetings of both groups. However, it was not implemented in the last meetings of both groups. The indicator social ties in these meetings were moderate (both meetings of group A) and strong and moderate (meetings group B). This gives an indication that this design principle was effective in the perspective that the group met for many weeks which made activities to further stimulate social ties in the last meeting not relevant.

Design principle 4: Goal interdependence is stimulated by negotiating shared goals and defining a common goal. This design principle was only implemented in the meetings of group A, resulting in indicator commitment to domain as strong and strong. However, the indicator collective goal showed a movement from moderate to limited.

In group B this principle was not implemented, resulting in the indicator commitment to domain showing moderate and moderate, and the indicator collective goal limited and moderate. These findings show an effect of this design principle in the reflection meetings on the indicator of commitment to domain only.

Design principle 5: Group members are stimulated to exchange resources. This design principle was implemented in both meetings of group B, and in the last meeting of group A. The results on the indicator shared knowledge were moderate (both meetings of group A) and limited and moderate (group B). This gives an indication that this design principle was to a certain extent effective in the perspective that the final result was moderate.

The main research question in this study was: Which design principles contribute to community development in either reflection or theme meetings of student teachers in school-institute partnerships? In the findings and discussion it was argued that the chosen design principles were feasible for the chosen type of meetings.

The conclusion of this study was that in reflection meetings, it is important that the group members learn to know each other's' qualities, expectations and concerns (design principle *learning to know each other*). For the theme meetings, three design principles stimulated community development: (1) *equivalent cooperation*, according to which it is emphasized that everyone is equivalent so that both student teachers and teachers can learn from each other and help each other to reach the group goals, (2) *goal interdependence* by negotiating shared goals and defining a common goal and (3) *group members are stimulated to exchange resources.*

The results do confirm to a large extent the results of our previous study on design principles on community development with student teachers in school-institute partnerships (Chapter 3). In that study we explored in a single case study 14 design principles based on the Learning Together Model of Johnson and Johnson (1999). In this study we focused on five of these principles in two cases with 15 student teachers and two mentor teachers. The results give a further understanding of the process and outcome of community development in such educational situations.

Some additional comments should be made to interpret the results in a broader perspective and to discuss the limitations of this study. The *mentor teachers* were very important in the implementation of the design principles. They were involved in the development of the intervention (together with the researchers) and they executed the actual implementation with their students in weekly meetings during a period of four months. For them this was the first time to work with such design principles and to be explicitly involved in community development. Their expertise was important for the successful implementation but this setting might also have influenced the findings

in the feasibility and the resulting quality of the community. Professional development of mentor teachers in this role seems to be important and an issue for further studies.

For the *student teachers* community development was also new. They were important participants because it was primarily their community. This also will have affected the results of feasibility and the resulting quality of the community development. In a following situation they may behave differently, using their experience. Group A consisted of students in the first year in higher education; the students of group B were in their second year, although both groups participated in a school-university partnership community for the first time. As far as we could observe and analyse there were no differences regarding the outcomes of this study.

To what extent were the student teachers and the mentor teachers *representative* for their groups? The student groups were regular groups; these students were randomly placed in this group and diverse in the subjects of their study. However, there can be large differences between groups, depending on individual characteristics of the group members, which may result in different group dynamics. In further studies this aspect should be regarded by enlarging the number of groups involved. Furthermore, two mentor teachers were involved, being selected out of four teachers after an evaluation of the first meetings. However, in further studies this aspect also should be regarded by enlarging the number of mentor teachers involved.

The *implementation* of the design principles is specifically relevant at the start of the meetings of the group. The first two or three meetings seem to be the most important for the development of the community, in the subsequent meetings only small adaptations in the quality of the community can be expected. The resulting community development will be mainly observable in the final meetings. In this perspective, in these final meetings the activities of the mentor teacher to implement the design principles will not be reliably visible, because the design principles were intended to be used at the start of the group meetings. In this study we measured the implementation and the quality of the community only in two reflection and two theme meetings per group, of which two meetings occurred at the beginning and two at the end of the four months' period. For further studies it is recommended to measure the implementation at least in the first two or three meetings, and the quality of the community in the last two meetings.

Additionally, it is important to bear in mind that instructions on the implementation of the design principles were discussed with the mentor teachers only before the start of the series of feedback and theme meetings. That is, teachers may have been less aware of the design principles and therefore of the opportunities for their implementation towards the end of the series of meetings.

The implementation of the design principles was elaborated through a number of *activities* that were developed by the mentor teachers and the researchers. This study

provided detailed information about the feasibility and appropriateness of these activities in this context. Adaptations and revisions of these activities, based on the findings, should be considered, because these activities are concrete elaborations of the more general design principles, and as such an essential part of the expertise needed for successful development of these communities.

Causality and functionality are important in the relation between design principles and the effects. When the expected result is not observable, it can be concluded that the design principle was not functional. However, when the expected result is observed, it cannot be concluded that the cause for this is in the implementation (only) of the principle.

4.4.1 Concluding remarks

The results of this study have provided a better understanding of an important problem: how to foster the development of communities of student teachers in school-university partnerships. In this study we focused on design principles for community development in meetings with two different types of focus: reflection meetings and theme meetings. Two groups with two mentor teachers and 15 student teachers were studied. The results haven given more information on the feasibility of the five design principles, and the relation between these design principles, the course aims and the effects of the design principles on community development in the educational situation of this study. However, further studies are needed to further fine-tune the elaboration of the design principles in the activities of the mentor teachers, and to provide information about the extent to which the conclusions can be generalized.

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Chapter 5

Transactional and transformational leadership in teacher communities in school-university partnerships

The last two decades there has been an increasing focus to create and sustain teacher learning communities. It is believed that teachers should come together for sustained periods of time to engage in collaborative activities of professional development of (student) teachers. In school-university partnerships (SUPs), communities are developed in which (student) teachers work and learn together. The leader of such communities plays a significant role in the development of the community and hence, the professional development of all participants. In this study, we examine the effect of transformational and transactional leadership acts on community development. Transformational and transactional leadership acts were measured through an observation protocol based on the Multifactor Leadership Questionnaire. Community quality was determined by the Community Quality Observation Protocol. Findings show that transformational leadership activities do not enhance community development in each situation; although an effect was found on the dimensions of shared domain and shared interactional repertoire.

5.1 Introduction

The last two decades there has been an increasing focus to create and sustain teacher learning communities. It is believed that teachers should come together for sustained periods of time to engage in collaborative activities of professional development of (student) teachers (Grosmann, Wineburg, & Woolworth, 2001). However, many questions remain about how to create and sustain a teacher community in which teachers' learning plays a significant role. In this study, we focus on school-university partnerships in which communities are formed in schools, consisting of teachers, student teachers and mentor teachers. These communities focus on both the education of student teachers and the professional development of teachers through learning from each other's experiences.

Previous research on the creation of communities in the partnerships (Chapter 3 and 4) showed that the leadership of the community plays a significant role in these principles to stimulate the development of these communities. Equivalent cooperation and rotating chairpersonship were two of the five principles that were found to stimulate community development. The idea that group members feel equivalent to each other and that the leadership does not depend on one person alone corresponds to the idea of Wenger (1998) on internal leadership, which is diverse and distributed. From this *distributed leadership* perspective, leadership is not positioned within the activities of one leader, but interaction between members of the community plays a central role in accomplishing effective leadership in a learning community. Spillane, Halverson, and Diamond (2001) argue that to understand this leadership, we should focus on activities and tasks rather than on the behaviour of individuals formally identified as the leaders. However, Firestone and Fisler (2002) remark that in a context of different stakeholders with different perspectives, where it is difficult to accomplish shared goals, distributed leadership can easily become dispersed leadership with accompanying chaos, isolation and conflict. However, in many communities in school-university partnerships a formal leader is appointed by the school or the university. This raises the question how distributed leadership can be accomplished in a hierarchical setting with a teacher as formal leader.

According to Harris (2004), who studied distributed leadership at the level of the school as a community, distributed leadership could be realized by *transformational leadership*. Transformational leaders build self-esteem, enhance professional competence and give the group members the confidence and responsibility to lead development and innovation. Transformational dimensions are idealized influence, inspirational motivation, individual consideration and intellectual stimulation. Transforma-

tional leadership and transactional leadership form two aspects of the leadership conceptualization. Four dimensions of transactional leadership are described by Pounder (2006): contingent reinforcement, active management by exception, passive management by exception and laissez-faire leadership.

However, these studies provide no information to what extent a transformational or transactional leader of a smaller group can also stimulate distributed leadership. As discussed above this distributed leadership is related to community development. Therefore we focused in this study on a better understanding how transformational and transactional leadership are related to distributed leadership and community development. For the setting of this study we chose community development in groups of student teachers with a mentor teacher as leader in teacher internships within a school-university partnership.

5.1.1 Teacher communities

Based on the concept of communities of practice (Lave & Wenger, 1991) a professional community of teachers is defined by Admiraal, Lockhorst, and Van der Pol (2012) as a group of teachers who are socially interdependent, who participate together in discussion and decision making, and share and build knowledge. These activities are characterized in the community model of Admiraal et al. by three dimensions: *Group identity*, *Shared domain*, and *Shared interactional repertoire*. *Group identity* is defined as mutual engagement that binds teachers together in a social entity. *Shared domain* is defined as a joint enterprise as understood and continually negotiated by its members. Finally, *Shared interactional repertoire* is characterized by a shared practice and beliefs on how teachers in a group interact. These three dimensions in this model are described with nineteen indicators (see Table 5.1). In this study we chose to focus on the observable activities of student teachers and mentor teachers. The other indicators are related to the perceptions and feelings of the community members. Therefore the following 13 indicators which are observable by an outsider of the community are most relevant for this study: identification, multiple perspective contribution, mutual trust and responsibility, social ties, commitment to domain, common ground, collective goal, shared knowledge, intellectual building, regulation of interaction, role taking, dynamic effort and dynamic position (Admiraal, Lockhorst, & Van der Pol, 2012). Some examples of a more detailed description of these indicators are:

- Multiple perspective contribution (1.2): There is room for multiple perspectives in members' contributions to the community, and members value these perspectives.
- Intellectual building (3.1): Members build on each other during discussions and use constructive communication.

- Role taking (3.3): Members actively take up roles (tasks, positions) and accept these from each other.

To characterize the quality of the community processes each of the indicators in the community model is described with three 'markers':

- Limited: The community processes are characterized by indications of limited group identity, and some degree of shared patterns, procedures and willingness to be active in the domain.
- Moderate: The community processes are characterized by consciousness of the group identity and development of collective activities.
- Strong: The community processes are balanced, shared and focused on a shared domain and feelings of group identity.

Table 5.1: Dimensions and Indicators of Admiraal, Lockhorst, and Van der Pol's (2012 Community Model

Dimensions of the community model	Indicators
1. Group identity	1.1 Identification 1.2 Multiple perspective contribution 1.3 Mutual trust and responsibility 1.4 Social ties 1.5 Emotional safety 1.6 Spiritual bond 1.7 Sense of collectivism 1.8 Neighbourliness 1.9 Co-worker support
2. Shared domain	2.1 Commitment to domain 2.2 Common ground 2.3 Collective goal 2.4 Shared knowledge
3. Shared interactional repertoire	3.1 Intellectual building 3.2 Regulation of interaction 3.3 Role taking 3.4 Dynamic effort 3.5 Dynamic position 3.6 Interactional norms

5.1.2 Transformational and transactional leadership

Transformational leadership and transactional leadership are two aspects of a broader leadership conceptualization.

Transformational leadership activities are comprised of idealized influence, inspirational motivation, individual consideration and intellectual stimulation (Bass & Avolio, 1994). Concerning idealized influence, the leader emphasises the importance of a vision and a sense of mission and provides this for the group. He displays a strong commitment to ideals and inspires his community members. This type of leadership motivates and inspires when he appeals to the feelings and emotions of his community members. He expresses his confidence in the success of the group and transmits an enthusiastic vision of the future. A leader is individually considerate when he recognizes the needs and abilities of his community members. He provides them with feedback and coaches and mentors them. A leader is intellectually stimulating when he questions assumptions, challenges his subordinates and encourages thinking out-of-the-box (Pounder, 2006).

Transactional leadership can encompass four types of behaviour: contingent reinforcement, active management by exception, passive management by exception and laissez-faire leadership. Contingent reinforcement or contingent reward means that the leader uses rewards or incentives to achieve results when expectations are met. Through active management by exception, the leader actively seeks out deviations from desired performance on the part of the followers with a view to taking corrective action. Passive management by exception is seen when the leader does not seek out deviations from desired performance but only takes action when problems present themselves. Finally, laissez-faire leadership "amounts to an abrogation of leadership responsibility" (Pounder, 2006, p.537). As far as laissez-faire leadership could be considered to be equivalent to an absence of leadership, this concept is left out in this study. We have to make the remark that a leader is not completely a transformational or transactional leader. A leader can show characteristics of both transformational and transactional leadership, dependent on the context and the situation. However, in this study, we refer to a transformational leader when he shows more acts related to transformational leadership than to transactional leadership.

The general assumption is that effective leaders are those that display more of the transformational and less of the transactional leadership characteristics. Our study is focused on the assumption that in a community of teachers a transformational leader has a stronger influence on the development of the group into a community (regarding each of the three dimensions) than a transactional leader.

To investigate this relation between leadership and community development the following approach was chosen. We studied groups of student teachers and mentor teachers who were involved in a partnership between schools and a teacher education institute of a university of applied sciences. The teacher education program consisted of a four-year program in which student teachers followed institutional courses for three or four days a week and functioned as interns for one or two days. During this internship, the student teachers met in groups with a teacher of the school. These groups were observed and recorded on video for a period of four months. In one week, the groups tackled a pedagogical subject based on an assignment of the mentor teacher (theme meetings). The other week, the students exchanged experiences with each other and reflected on their behaviour (reflection meetings). To explore the influence of different leadership on community development we selected two mentor teachers, based on their assumed different leadership style. The first two and the last two of these meetings were analysed in detail because we expected to see the strongest differences between these four meetings. The analysis was carried out in four steps, each providing information on an important issue in this study.

The aim of *Step 1* was to compare the leadership styles of both mentor teachers and to understand to what extent the mentor teachers could be characterized as a transformational leader or a transactional leader. This step involved a description at macro level of the leadership style during the four meetings. The four characteristics of the transactional and transformational leadership styles were used as of the basis for this macro level description of leadership.

The aim of *Step 2* was to compare for each meeting the leadership styles of the mentor teachers to find to what extent the mentor teachers in each of the meetings was acting as a transformational or a transactional leader. This step involved an analysis at micro level of the leadership behaviour of the mentor teachers during the four sessions. A Leadership Style Observation Protocol, inspired by a study of Bass and Avolio (1990) was used to analyse all activities of the leaders in the meetings.

The aim of *Step 3* was to determine the level of the community quality at the meetings through an analysis of (the growth of) the three dimensions *Group identity, Shared domain* and *Shared interactional repertoire*. The transcripts of the meetings were used to categorize the group's activities on all three dimensions, using the three markers of the community model.

In *Step 4* the outcomes of the previous steps were combined to analyse the relation between leadership styles and community quality. The findings on the leadership of the mentor teachers were combined with the findings on the community indicators. The analysis was conducted on a qualitative basis by comparing the data on the groups acquired in the previous steps.

The general research question in this study is: How are transformational and transactional leadership activities related to the quality of a community in a school-university partnership? With the four steps four sub questions are distinguished:

1. To what extent can mentor teachers be characterized as a transformational leader or a transactional leader (Leadership Style at Macro Level)?
2. To what extent are mentor teachers in each of the meetings acting as a transformational or a transactional leader (Leadership Style at Micro level)?
3. What is the level of community quality at the meetings of the communities (in terms of Dimensions and Indicators)?
4. What is the relation between leadership style and community quality?

5.2 Method

5.2.1 Participants

A teacher education institute of a university of applied sciences in the Netherlands was willing to cooperate in this study. Four schools were participating in a school-university partnership that started in 2008 as a pilot project. The teacher education institute hosts programs for both primary school teachers and secondary school teachers. Two mentor teachers of two different schools were selected based on the difference in leadership styles they showed in a previous evaluation. They were both female and had 15 and 20 years of teaching experience. They participated on a voluntary basis and received no additional remuneration for joining the project.

Group A (with mentor teacher A) consisted of seven first year student teachers, group B (mentor teacher B) of eight second year student teachers. These student teachers have chosen a specific school subject to become a teacher in. In the group of first-year student teachers, the subjects the students chose for were English, Biology, Geography, Economics and Dutch Language. The second-year student teachers had chosen for Biology, English, History, Dutch Language, Geography and Art Education. The students were between 17 and 25 years of age. All students were enrolled in a full-time four year bachelor program, participated on a voluntary basis in the project and received no rewards.

5.2.2 Context

Both mentor teachers received before the meetings a manual of the teacher education program, consisting of a schedule for the meetings, and educational materials and

resources to support the learning process of the student teachers. These materials consisted of a theoretical explanation of the subjects of the theme meetings and a procedure for the reflection meetings. This procedure is called the incident method (Bijkerk & van der Heijden, 2006) and consists of five main phases. In the first phase, a student teacher brings in an incident he encountered in his practice. The student teacher introduces a situation and describes the problem until the critical moment in which he or she took action. In the second phase, the group members ask the student teacher questions to gain insight into the problem. The third phase involves a description of the situation by the other group members. The group members discuss their vision on the situation and possible causes and motives. In the fourth phase, the group members describe what they would have done in this situation. In the last phase, the student teacher tells the group how he reacted on this incident. His or her actions and the new insights of the other group members are then discussed.

5.2.3 Instruments

Data on the two groups (cases A and B) were collected for a period of four months. All meetings of the group were videotaped. However, in this study, only the videotapes of the first two and last two meetings of each group were transcribed, because we expected to find between these sets of meetings the largest differences in community level. The community level and the transformational or transactional activities of the mentor teacher were analysed.

Community Quality Observation Protocol. To measure the level of community quality, the videotapes were analysed according to the observation model of Admiraal, Lockhorst, and Van der Pol (2012). The observation protocol was a high inference observation measurement, because the incidence of specific behaviour is in itself not informative about the quality of that behaviour. Each videotape was first observed to become acquainted with the activities and personalities of the group. The most salient behaviours were recorded and categorized in the indicators (see Table 5.1). For each videotape, a description was made of all activities of the group, categorized in the 13 observable indicators of the community model, as described above. Next, each meeting was observed again for each dimension separately, looking for less obvious activities referring to the indicators of that dimension. This resulted in thick descriptions of the behaviour of the group, including both verbal utterances and non-verbal gestures. Based on the qualitative descriptions, it was determined for each indicator whether it corresponded to the limited, moderate or strong community level.

To develop and establish the reliability and validity of this measurement instrument, it was used by four researchers of the project team. In three cycles of independ-

ent rating and subsequent discussion, fragments of observations were coded with the markers of the indicators until full agreement was reached and the coding scheme was satisfactory in detail. This procedure was considered to be sufficiently reliable.

Leadership Style Observation Protocol. To determine whether the activities of the mentor teacher were mainly transformational or transactional, the transcripts of the videotapes were used to study also the activities of the mentor teachers. First, four of the eight transcripts (two of each group) were analysed on the utterances of the mentor teachers. All utterances were described in terms of acts the mentor teachers performed. Second, these acts were categorized with a coding scheme that was developed to analyse the other four transcripts. The coding scheme is found in Table 5.2. Finally, the coded acts of the mentor teachers were described in three categories: (1) transformational; (2) transactional; (3) not applicable. The relations between these categories and the transformational or transactional leadership were on an a priori basis decided, based on the *Multifactor Leadership Questionnaire* (Bass & Avolio, 1990) and a content analysis, and agreed upon among the authors of this paper (Table 5.3). In this way the mentor teachers acts, on both the macro and micro level, could be described and analysed.

Table 5.2: Coding Scheme for Individual Acts of the Mentor Teachers as Leaders of the Group

Category	Observed Teacher Acts	Transformational or Transactional
1. The mentor teacher asks questions	1.1 Asks questions about factual information	not applicable
	1.2 Asks questions about opinions and experiences of the students	transformational
	1.3 Asks for different opinions	transformational
	1.4 Asks for the needs of the students	transformational
	1.5 Asks for clarification	not applicable
	1.6 Asks to contribute to the group	transactional
	1.7 Stimulates critical thinking and reflection	transformational
	1.8.Asks whether students have performed their tasks/homework	transactional
2. The mentor teacher gives an explanation	2.1 Expresses her opinion	transformational
	2.2 Expresses a different point of view	transformational
	2.3 Gives factual information	not applicable

Category	Observed Teacher Acts	Transformational or Transactional
	2.4 Gives an instruction	not applicable
	2.5 Expresses do's and don'ts	transformational
	2.6 Expresses her vision	transformational
	2.7 Gives a theoretical explanation	not applicable
	2.8 Stresses individual responsibility	transformational
3. The mentor teacher stimulates a positive atmosphere	3.1 Makes jokes	transformational
	3.2 Shows empathy	transformational
	3.3 Discusses problems in the collaboration	not applicable
	3.4 Wishes the students good luck	not applicable
4. The mentor teacher provides confirmation	4.1 Confirmation that she is listening	transformational
	4.2 Confirmation that the students are working well	transformational
	4.3 Confirmation that the students met expectations	transactional
5. The mentor teacher regulates interaction	5.1 Makes a summary	not applicable
	5.2 Draws conclusions	not applicable
	5.3 Closes the discussion	transactional
	5.4 Divides tasks and roles	not applicable
	5.5 Points to students to answer questions	not applicable
	5.6 Brings students back to the subject	transactional
	5.7 Decides on procedures to be followed	not applicable

To establish interrater reliability, four protocols with 796 leader acts (49% of the total number of coded acts) were coded by two independent raters. Cohen's Kappa (1992) delivered an interrater reliability of .66. The two raters discussed differences in codings until full agreement was reached.

5.2.4 Data Analysis

As described before, observation protocols were analysed in four steps. These are now described in more detail.

Step 1. Analysis of Leadership Style on Macro Level. The four characteristics of the transactional and transformational leadership styles were used as a point of departure

of this macro level description. The video recordings of each mentor teacher were used to produce thick descriptions of the behaviour of the teachers and the groups, including both verbal utterances and non-verbal gestures. Various signs were then used for the assessment. An important criterion was the extent to which the teacher adhered to the predefined plan, because strict application of the predefined lesson plan was interpreted as a reference to the transactional leadership style. A second criterion was the extent to which the responsibility shifted from the leader towards the students. Using these signs the data were analysed to assess the teacher's preferred leadership style. The assessment ended with a qualitative description on macro level of both teachers from the perspective of both leadership styles.

Step 2. Analysis of Leadership Style on Micro Level. This step has been explained above under the Leadership Style Observation Protocol in the section Instruments. The analysis resulted in a description of both teachers from the perspective of both leadership styles in the meetings on micro level.

Step 3. Level of Community Development Assessment. This step has been explained above under the Level of Community Development Observation Protocol in the section Instruments. The indicators for each of the dimensions with three markers (Admiraal, Lockhorst, & Van der Pol, 2012) were used to describe what the quality of functioning as community was. Only data on the first and last meeting for each of the two groups were used for the analysis of the level of the community quality.

Step 4. Analysis of the relation between Leadership Style and Community Development. For both mentor teachers and student teachers' groups a qualitative comparison was made in which leadership style and level of community quality were related. By inspecting the style of leadership at macro and micro level and the functioning of the communities on all three dimensions of the community development model of Admiraal, Lockhorst, and Van der Pol (2012), more understanding was provided to what extent transformational leadership does stimulate community development compared to transactional leadership.

5.3 Results

5.3.1 Leadership Style on Macro level

The first research question was: To what extent can mentor teachers be characterized as a transformational leader or a transactional leader (Leadership Style at Macro Level)? The acts of teachers A and B in four meetings were analysed to answer this question.

Mentor teacher A did not follow the provided schedule. At the first meeting of the group, she asked the student teachers which aspects of the learning profession they thought would be interesting to discuss. Only the first of the theme meetings which involved an assignment for the teacher education program were performed as planned in the provided schedule. The content of the other theme meetings were discussed by the group and the activities were proposed by the student members. In this way, group A invited guest speakers and interviewed them, visited other schools and classes, or prepared some subjects themselves.

Mentor teacher A also tried to shift responsibility from her to the student teachers, e.g., by giving a student teacher the role of chairperson while she was acting as mediator. Also within the reflection meetings, the mentor teacher stimulated scaffolding by diminishing her contribution to the incident method in the meetings during the four months. At the end of the series of meetings, the student teachers were organizing the reflection meetings by themselves.

Using this method the needs of the student teachers became apparent and the student teachers took responsibility for their own professional development. However, this meant that there was more space for the student teachers to profile themselves as individuals. In this situation a personal conflict occurred between one student teacher and the rest of the group. He was accused of making racist comments and to profile himself as an expert in teaching. The conflict was most visible between the specific student teacher and another dominant student teacher. As a result, there remained a tension within the group, expressed by rolling eyes and groans and moans.

Mentor teacher B strictly used the schedule and materials provided by the teacher education program. Student teachers were sometimes asked what they wanted, but only in a limited way and focused on procedural activities. All meetings were structured according to the same schedule: welcome, taking stock of students' problems, instruction, discussion and evaluation. To structure these meetings in this way asks for a high involvement of the mentor teacher. As such, the transcripts of mentor teacher B showed a high number of utterances and acts focusing on the regulation of the meeting. Surprisingly however, mentor teacher B did not end the meetings in a structured way; there was no closing activity.

Concerning the shift in responsibility, in the case study of mentor teacher B we did not see any signs of shared responsibility or the responsibility shifting from mentor teacher to student teachers. Mentor teacher B was the chairperson during the four meetings. Student teachers were randomly assigned to take notes. When discussing a theme or reflecting on experiences, the mentor teacher asked specific student teachers to answer questions or to contribute to the group.

The structuring nature and the position of the mentor teacher B as leader led to very intensive meetings with a high pace in information flow provided to the student teachers. However, it is not clear whether specific learning needs of the student teachers were met and whether student teachers learned to give form to their own professional development.

5.3.2 Leadership Style on Micro level

The second research question was: To what extent are mentor teachers in each of the meetings acting as a transformational or a transactional leader (Leadership Style at Micro Level)? The findings are summarized in Table 5.3 and 5.4. Both teachers significantly differ in the distribution of transformational and transactional acts, when taking the total number of acts into account (Table 5.3), X^2 (2, N = 1636) = 74.72, p < .01, and also when taking the five most frequent acts into account (Table 5.4), X^2 (4, N = 1074) = 41.44, p < .01.

Mentor teacher A showed a high percentage of transformational activities: 61% of her acts were categorized as transformational (Table 5.3). Her most frequent act was 'Confirmation that she is listening' (4.1.) (Table 5.4). Additionally, seven of her ten most frequently acts were transformational: 'Confirmation that she is listening' (4.1.), 'Expresses her opinion' (2.1.), 'Asks questions about opinions and experiences of the students' (1.2.), 'Stimulates critical thinking and reflection' (1.7.), 'Expresses do and don'ts' (2.5.), 'Asks for the needs of the student teachers' (1.4.) and 'Confirmation that the student is performing well' (4.2.). Acts of mentor teacher A, coded as Not applicable, which she used frequently, were: 'Gives factual information' (2.3.), 'Asks questions about factual information' (1.1.) and 'Decides on procedures to be followed' (5.7.).
Mentor teacher A showed about the same number of transactional acts as mentor teacher B. She used 'Confirmation that the students met expectations' (4.3.), 'Asks whether students have performed their tasks/homework' (1.8.), 'Brings students back to the subject' (5.6.) and 'Closes the discussion' (5.3.).

Mentor teacher B showed in 40% of her acts signs of transformational leadership, consistently throughout the four meetings. In all four meetings the act of 'Gives factual information' (2.3.) (which was coded as 'not applicable') was her most frequent act. The second most frequent act was 'Confirmation that she is listening' (4.1.). The frequency of this act comprised almost half of all transformational acts of this mentor teacher. Mentor teacher B showed also other activities frequently within this category of Individual Consideration: 'expresses do and don'ts' (2.5.) and 'asking for opinions

and experiences of the students' (1.2.). Additionally, 'asking for factual information' (1.1) was the third most frequent act and 'expressing her opinions' (2.1.) the fourth.

Other frequent acts were related to the category 5 'Regulation of the interaction', like 'Points to students to answer questions' (5.5), 'Decides on procedures to be followed' (5.7) and to category 2 'Give an explanation' 'Gives an instruction' (2.4). Mentor teacher B showed in 2% of her acts transactional leadership (the same as teacher A), which were: 'Brings students back to the subject' (5.6), 'Asks whether students have performed their tasks/homework' (1.8), 'Asks students to contribute to the group' (1.6) and 'Confirmation that the students met expectations' (4.3).

Table 5.3: Transformational and Transactional Acts of Mentor Teachers

Category of acts	Number of acts of mentor teacher A	Percentage of acts of mentor teacher A	Number of acts of mentor teacher B	Percentage of acts of mentor teacher B
Transformational	489	61%	340	40%
Transactional	16	2%	14	2%
Not applicable	291	37%	486	58%

Table 5.4. Most Frequent Acts of the Mentor Teachers

		Mentor Teacher A (796 acts)		Mentor Teacher B (840 acts)	
Five most frequent acts	Transformational or transactional	Number of acts	Percentage of acts	Number of acts	Percentage of acts
1.1 Asks questions about factual information	Not applicable	81	10%	114	14%
1.2 Asks questions about opinions and experiences of the students	Transformational	51	6%	52	6%
2.1 Expresses her opinion	Transformational	60	8%	63	8%
2.3 Gives factual information	Not applicable	125	16%	209	25%
4.1 Confirmation that she is listening	Transformational	196	25%	123	15%

5.3.3 Level of Community Processes

The third research question was: What is the Level of Community Processes at the meetings of the communities in terms of dimensions and indicators? The following results are based on the Community Development Observation Protocol and the related indicators for the three dimensions (see Table 5.1). The results described in this section are summarized in Table 5.5.

Table 5.5: A Summary of the Results on Community Development

Dimension	Indicator	Community A: first meeting	Community A: last meeting	Community B: first meeting	Community B: last meeting
Group Identity	Identification	Moderate	Limited	Limited	Strong
	Multiperspective contribution	Moderate	Limited	Moderate	Moderate
	Mutual trust and responsibility	Strong	Moderate	Strong	Strong
	Social ties	Strong	Moderate	Moderate	Strong
Shared domain	Commitment to domain	Moderate	Moderate	Moderate	Strong
	Common ground	Moderate	Strong	Limited	Moderate
	Collective goal	Limited	Moderate	Limited	Moderate
	Shared knowledge	Limited	Moderate	Limited	Moderate
Shared interactional repertoire	Intellectual building	Moderate	Moderate	Moderate	Strong
	Regulation to interaction	Moderate	Strong	Moderate	Moderate
	Role taking	Moderate	Strong	Moderate	Moderate
	Dynamic effort	Strong	Strong	Limited	Limited
	Dynamic position	Limited	Strong	Limited	Limited

5.3.3.1 Group A

Concerning *Group identity* (dimension 1) the group changed considerably between the first and the last meeting (observations, video recordings). Concerning indicator Identification (1.1), the group members rarely used the We-voice in an active manner, suggesting that group members were not actively identifying with the group. In the last meeting the group members did not actively identify with the group.

Concerning the indicator Multiple perspective contribution (1.2), in the first meeting, the group members were confident enough to present their multiple perspectives. The other group members mainly reacted on their utterances in a neutral or positive way. For example, one student teacher questioned the relevance of reflection. The other student teachers explained the goal of reflecting, taking into account the other students' fear of giving himself away. During the meetings, the group became in personal conflict with one student teacher. This conflict was most visible between the specific student teacher and another dominant student teacher. As a result, the two student teachers did not value each other's perspective any more. In the last meeting, the two students became more hostile when giving each other feedback. This resulted in rolling eyes and groans and moans. As a consequence, the atmosphere of the group was more and more hostile.

Concerning the indicator Mutual trust and responsibility (1.3), in the first meeting the climate was very open, more open than expected for a beginning group. The group discussed their fears and negative characteristics very openly. Because most of these fears were related to the problems of beginning teachers, most of the time these fears were recognized and reacted to positively. The group members seemed to understand each other's issues and reacted with empathy. In the last meeting, the climate still showed to be open. Student teachers still exchanged their experiences and personal problems, but group members rarely reacted on these personal utterances and if so, their reactions were very neutral. The climate was open but also formal. The group did not react to the personal issues of the student teachers with which they had a conflict before.

Concerning the indicator Social ties (1.4), in the first meeting the atmosphere could be characterized as friendly, informal, with a lot of jokes and teasing. As a consequence of the conflict mentioned earlier, the atmosphere changed during the activities. In the last meeting the group still made jokes but the atmosphere could alter immediately to a hostile environment, when the two dominant student teachers showed hostile remarks and non-verbal behaviour to each other.

Concerning *Shared domain* (dimension 2), the group members seemed to be in general loyal to the subject at hand and the group. Regarding Commitment to domain (indicator 2.1), student teachers deviated in some instances from the subject but refocused when the mentor teacher intervened. The group seemed to be committed to the subject, although the group members showed this in different ways. An introvert student teacher showed mostly non-verbal behaviour by nodding, humming and writing down notes. She answered the questions posed, but was not likely to lead the discussion.

Concerning the indicator Common ground (2.2), the definition of concepts was increasingly negotiated. In the first meeting, concepts were used without explicitly

discussing the definition of the concept. It also seemed that most group members had the same definition of the concepts, probably because all student teachers were following the same courses at the same institute and accepted the definitions of that institute. In the last meeting, the group members took the time to decide whether every group member had the same definition. Concepts were discussed explicitly and sometimes group members disagreed about the definitions.

Regarding the indicator Collective goal (2.3), the group meetings involved a lot of different activities. However, it was not always clear in which way individual needs were addressed. The goals of the group depended on the activity at hand. In the beginning of the meetings, the group started with an activity in which each student teacher was able to present his or her concerns. It was clear that the group members all had individual goals. During more subject-related activities, the goals of the individuals became more group goals. In the reflection activities, the focus was again more on the individual goal of the student who presented her experience. However, in the last meeting, the group members were more able to abstract from the individual experience to a higher level, and to develop a common goal. In general, there was no discussion about the collective goals.

Finally, the group members *shared knowledge* with each other (indicator 2.4), mainly in the form of exchanging experiences. In the first meeting experiences and materials were shared. In general there was agreement about this knowledge but the newly developed knowledge was not used. In the last meeting there was more discussion but there was not always agreement on the quality and truthfulness of the knowledge.

Concerning *Shared interactional repertoire* (dimension 3), almost all group member showed on the indicator Intellectual building (3.1) their willingness to build on each other during discussion. In the first meeting, there were few arguments because of the lack of knowledge of the student teachers. Constructive arguments remained on the level of presenting methods which could be tried out in the class, or by giving suggestions to talk with experts in the teacher education institute. In the last meeting, the arguments became more subject related, and this was complemented with their own experiences and knowledge. The issues of the two conflicting student teachers were not argued constructively, e.g., when discussing the research question of one of them, one student teacher remarked: “This is a superficial question”.

Regarding the indicator Regulation of interaction (3.2), the regulation was not discussed in the first meeting by the group members but was accepted. In the last meeting, the mentor teacher tried to shift responsibility to the student teachers, and emphasized that the student teachers should react more on each other. This regulation was then discussed and accepted.

The indicator Role taking (3.3) showed some changes between the first and last group meeting. In principle, the group had chosen for a rotating chairpersonship. In the beginning however, the teacher educator was the chairperson while a student took notes. As such, the role-taking was concentrated into the mentor teacher, but accepted. In the last meeting, the roles were distributed evenly throughout the meetings and this was accepted by all group members. Sometimes an exception occurred when the student teachers had to be stimulated to react not only to the mentor teacher but also to each other.

Concerning the indicator Dynamic effort (3.4), there were no major differences within the group. There was also no change on the indicator between the meetings. One student teacher had a very introvert character. The two conflicting student teachers were sometimes dominant in the discussions. However, the group generally accepted these differences in input and effort.

The indicator Dynamic position (3.5) showed an increase. In the first meeting, the boundaries of the group were closed, and the group members took on static positions in the group. During the project, guest speakers were invited to join the group, which resulted in an open climate in which often outside experts were consulted in response to the need of the student teachers. Group members also changed their positions within the group, dependent on the subject at hand, moving from the periphery to the core of the community and vice versa.

5.3.3.2 Group B

Concerning *Group identity* (dimension 1), the behaviour of the group changed from a passive I-voice towards an active We-voice (indicator 1.1 Identification). In the first meeting, the group members did not seem to identify themselves with the group as a whole, but with subgroups which apparently were made within the teacher education program. In the last meeting group members used the We-voice actively in the discussion or when they had to decide what to plan for the next week. In reflection meetings, identification showed more characteristics of the I-voice.

The group members did not show any change in behaviour on the indicator Multiple perspective contribution (1.2). In the first meeting the group valued the perspectives of the other group members positively but did not use it as a means to progress their understanding. In the last meeting the same occurred. Group members were interested in each other's opinions, but did not use it to gain knowledge. In an exceptional situation, one student teacher valued the opinions of another student teacher negatively and saw them as a personal assault. The main difference between the beginning and end of the group was the number of perspectives used in the group.

Regarding the indicator Mutual trust and responsibility (1.3), the climate in the group was in general open. In the first meeting, for example, one student teacher felt

bad about an event which occurred in the classroom. She felt responsible because she did not handle consistently according to herself. The group members showed behaviours of empathy and responsibility for the well-being of the student teacher. This was not different in the last meeting. With some exceptions, the group members reacted positively to each other's problems.

Concerning the indicator Social ties (1.4) there was a friendly, informal atmosphere. The group members made jokes and were teasing each other. In the first meeting, there was a physical and emotional distance between the mentor teacher and the student teachers. The mentor teacher decided towards the end to be seated next to the student teachers, instead of in front of them. This seemed to improve the atmosphere.

Concerning *Shared domain* (dimension 2), the groups' Commitment to domain (indicator 2.1) increased from the first to the last meeting. In the first meeting the group members were loyal to the group, but were convinced that they were able to do several things at the same time. For example, the student teachers were listening to the instruction of the mentor teacher, but at the same time they were complementing their journals. The engagement for the groups' task increased in the last meeting in which the student teachers were not only loyal to the group, but also were committed to the group domain.

The indicator Common ground (2.2) also changed. In the first meeting, the definition and understanding of concepts was not discussed explicitly. However, at least in one instance in the meeting we found that there was no agreement on the definition of a concept. In the last meeting, the group sometimes did not agree on the definitions, but it was discussed explicitly.

During the meetings the group developed on indicator Collective goal (2.3). In the first meeting the group did not seem to have clear what the goal of the group was. It seemed that they were only performers of the task given by the mentor teacher. In the last meeting they took up more responsibility for the group, and also saw individual tasks as a way to help other group members. The individual goal of learning shifted to a common goal of helping each other out. However, the group members did not communicate explicitly about these goals.

Concerning the indicator Shared knowledge (2.4), the group shifted from knowledge that was generated by mentor teacher into knowledge created together. In the first meeting the group took up the knowledge of the mentor teacher as a sponge. In the last meeting experiences, ideas and personal visions were exchanged. In most cases, the group agreed on the shared knowledge. However, it seemed that they did not use that knowledge to enhance their learning.

Concerning *Shared interactional repertoire* (dimension 3), the behaviour on the indicator Intellectual building (3.1) showed an improvement in constructive argumentation. In the first meeting there was little interaction between the group members. Most of the time student teachers responded to the mentor teacher and asked or answered questions to/from her. At the end the student teachers also reacted to each other, and build on each other's ideas. Most of the time, this was in an associative way, linking ideas to previous ideas of other group members.

Concerning the indicator Regulation of interaction (3.2), the interaction was regulated by the mentor teacher during both meetings. The mentor teacher presented herself as the leader of the group and acted accordingly. The regulation was not discussed, but overall accepted by the student teachers.

Related to this, the indicator Role taking (3.3) did not change during the meetings. Both in the first and last meeting, the mentor teacher had the role of leader, expert and chairperson. Sometimes one of the student teachers took the lead, but in most cases, this was in the role of time guardian. In conclusion, the role taking was concentrated but accepted by the group members.

Concerning the indicator Dynamic effort (3.4), some interesting change occurred. In the first meeting a difference in effort was not accepted by the student teachers. They did not made this explicit but made sure that everyone was focused on the task at hand and contributed to the product. In the last meeting there were still differences between group members' effort but the student teachers seemed to accept this. However, the mentor teacher did not and asked the students to contribute to the group by calling the names of the people who had to answer the question. So there was some dissonance about group members' effort.

Related to Role taking (3.3) and Regulation of interaction (3.2), the Dynamic position in the group (3.5) was very static in the first and last meeting. The mentor teacher played a central role in the group, and the student teachers took on a peripheral stand.

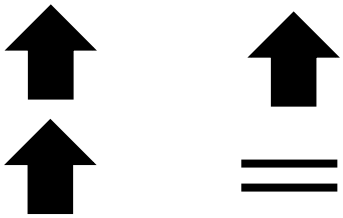
5.3.4 Leadership Style and Community Quality

The fourth research question was: What is the relation between leadership style and community quality? The findings of step 1, 2 and 3 are summarized in Figure 1.

Figure 5.1: Summary of the Findings in Step 1, 2 and 3

Dimension	Indicator	Teacher A Transformational	Teacher B Transactional
Group identity	Identification Multiperspective contribution	↓	↑

	Mutual trust and responsibility
	Social ties
Shared domain	Commitment to domain
	Common ground
	Collective goal
	Shared knowledge
Shared interactional repertoire	Intellectual building
	Regulation to interaction
	Role taking
	Dynamic effort
	Dynamic position



In this study, community A, with the mentor teacher showing more transformational leadership acts developed positively on the dimensions of *Shared interactional repertoire* and *Shared domain*, but developed a weaker *Group identity*. Community B showed an increase in community processes concerning group identity and shared domain, but the level of shared interactional repertoire stayed the same.

5.4 Discussion and conclusion

The general research question in this study was: How are transformational and transactional leadership activities related to the development of a community in a school-university partnership? Four sub questions are distinguished, that will be answered first, before drawing conclusions on the general research question.

1. To what extent can mentor teachers be characterized as a transformational leader or a transactional leader (Leadership Style at Macro Level)?

Mentor teacher A showed more transformational behaviour on the macro level of leadership. She did not follow the schedule and materials provided by the teacher education strictly but tried to fit in the needs of the student teachers within the program. She acknowledged the needs of the student teachers and alternated and combined the assignments of the teacher education program with visits to other institutes or invitations of experts in the field. Additionally, mentor teacher A shifted responsibility from herself to the students by scaffolding the process of the reflection moments. At first, she supported the student teachers by explaining the incident method and correcting mistakes student teachers made. When the student teachers were acquainted with this method, she accompanied the student teachers in their reflection

process and intervened only if necessary. Finally, at the end of the school year, the student teachers performed some of their reflection meetings without the support of the mentor teacher.

Mentor teacher B showed less transformational behaviour on the macro level of leadership. She followed the curriculum very strictly and did not ask for the student teachers' needs in their professional development. Additionally, mentor teacher B did not show signs of shifting responsibility towards the student teachers. Mentor teacher B was in charge and designated student teachers to answer questions.

2. To what extent are the mentor teachers in each of the meetings acting as a transformational or a transactional leader (Leadership Style at Micro Level)?
Mentor teacher A showed 61% acts of transformational behaviour. In contrast, mentor teacher B showed only in 40% of her acts signs of transformational behaviour. However, the amount of transactional acts did not differ between the two mentor teachers. Mentor teacher B showed more acts that could be defined neither as transformational nor transactional acts, based on the theory of Bass and Avolio (1990).

3. What is the level of community quality at the meetings of the communities (in terms of dimensions and indicators)?
Concerning community quality at the meetings of the community, community A showed a weaker *Group identity* at the end of the school year than in the beginning. The community changed from having a collective identity to an individual identity; less perspectives were brought to the group and the social atmosphere and mutual trust was unsure. This could be caused by an incident between a student teacher and the rest of the group, which was not solved completely during the school year. Concerning the other dimensions, community A showed an increase in community quality on both the dimensions of *Shared domain* and *Shared interactional repertoire*. Commitment to the domain stayed the same but individual goals became collective goals, knowledge was created and common concepts discussed. Community A changed from a static to a dynamic community in which expertise was sought outside the community when necessary. Additionally, role-taking was distributed, there were no differences in effort, the regulation of interaction was discussed and constructive argumentation increased. The student teachers were given the chance to determine the rules and norms of the group and were involved in deciding how to collaborate with each other.

The community quality of community B showed an increase in *Group identity* and *Shared domain*. The *Shared interactional repertoire* stayed the same. Community B changed from an individual to a *Group identity*; the use of different perspectives and mutual trust stayed the same during both meetings. The social atmosphere in the community got friendlier at the end of the school year. Concerning shared domain, all

indicators shifted from an individual towards a *Shared domain*. Community B stayed on the same level on the dimension of *Shared interactional repertoire*. The mentor teacher played a significant role in the meetings as a chairperson and expert. Therefore, role-taking was not distributed, group members did not change in dynamic position or effort and the interaction was regulated by the mentor teacher. Only intellectual building became more apparent in the last meeting, where student teachers helped each other to solve the problem.

4. What is the relation between leadership style and community quality?
In this study we found that the community with the more transformational leader, showed an increase in community level on both *Shared domain* and *Shared interactional repertoire* but a weaker *Group identity.* The community with the more transactional leader showed an increase in *Group identity* and a *shared domain*. However, the *Shared interactional repertoire* stayed the same and at a minimal level.

This study focused on the relationship between transformational and transactional leadership activities of a teacher mentor and the development of a community in a school-university partnership. It was believed that transformational leadership is a better support for the development of communities of student teachers than transactional leadership, through the development of distributed leadership. However, it turned out that transformational leadership does not under all conditions further the development of communities of student teachers. In this study the group with the leader showing more transformational leadership activities developed positively on the dimensions of *Shared interactional repertoire* and *Shared domain*, but developed a weaker *Group identity.* This could be explained by the fact that mentor teacher A granted more responsibility to the group in an early stage of the history of the group. As a consequence, there was more room for personal input leading to an incident that happened in the group in which one of the students caused a conflict which could not easily be handled by the mentor teacher. In the group with the leader showing less transformational leadership activities, the mentor teacher intervened faster and kept the student teachers more to the task at hand. Therefore, less room for personal input was possible but probably also less conflicts could occur.

This study confirmed Firestone and Fisler's (2002) concern that distributed leadership can easily turn into dispersed leadership with accompanying conflicts. Our conclusion is that good leaders in student teachers' communities adopt the best of both leadership styles: on the one hand, maintaining active group management and providing a safe environment for community development. On the other hand, encouraging the community to become responsible for its own development.

A second outcome of this study is that it was shown to be relevant to study the impact of leadership styles on community development by observing and analysing leadership acts. The *Leadership Style Observation Protocol,* including the details for coding the observations we developed on the basis of the *Multifactor Leadership Questionnaire* (Bass & Avolio, 1990) proved to be good enough to discern major behavioural characteristics of transformational leaders. However, the results show that although mentor teacher B showed less transformational acts than mentor teacher A, she did not show more transactional acts. The majority of her acts could not be defined as either transformational or transactional.

Additionally, it was found that the categories on Macro and Micro Level of leadership should be better related. Particularly, the acts regarding following the needs of the student teachers and transfer of responsibility from leader to community are not well represented in the *Leadership Style Observation Protocol*. Therefore an adaptation and extension of this coding protocol is recommended.

The limitations of this study are that we studied two leaders with two groups of student teachers. But these two case studies provided interesting and relevant outcomes, inspiring for further studies. Additionally, these two groups differed in their composition, in the way that community A consisted of first year students and community B was composed of second year students. However, the student teachers from both communities participated in a school-university partnership for the first time. Therefore, we believe that the composition of the community did not substantially influence the findings in this study.

We also did not take into account that leadership styles may change under the influence of the context of the course in which the group meetings take place. One can imagine that leaders start with a more pronounced manifestation of their style of leading a group, and gradually adapt their style as the group develops and becomes more mature. It is also possible that a transactional leader is less sensitive to group developments than a transformational leader. A third option is that transformational leaders intentionally transfer responsibility for joint activities in the course of the group meetings whereas transactional leaders stick to their original way of leading the group. However, in this stage of our research, we decided not to take the development of the leadership styles of mentor teachers into account. The reasons were pragmatic. We first wanted to do an explorative study on leadership styles and community processes, thereby also validating the instruments to categorize the observations of the acts of teachers and students in the meetings. Analysing fluctuations and developing trends in leadership styles was considered as a next stage in research in this field.

Based on this study and previous research (chapter 1, 2 en 4), it is clear that the mentor teacher plays an important role in community development in school-university partnerships, stimulating the professional development of both student teachers as mentor teachers. Mentor teachers should be aware of their activities and the reaction of the students to find a balance between stimulating distributed leadership through transformational and transactional activities. The school and institute should be aware of this balance when providing guidelines for mentor teachers. More research on the development of leadership styles, taking into account both the behavioural (leadership as behaviour) and attributional (leadership as a trait) approach towards transformational and transactional leadership, will be relevant for mentor teachers.

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Chapter 6

General conclusions and discussion

This thesis aimed to explore ways to stimulate community development in school-university partnerships in teacher education. The four studies in this thesis provided insights in the way student teachers collaborate and insights in ways to foster community development in SUPs. The general research question was: *How can we stimulate community development in school-university partnerships?* The focus and conclusions of each of the empirical studies will now be discussed and general conclusions will be drawn.

6.1 Findings from the four studies

This thesis started with an overview of the state-of-the-art of the preparation of student teachers to participate in communities of secondary school teachers. The research question of this study, as reported in chapter 2 was: *To what extent do the teacher education curricula in three teacher education institutes in the Netherlands pay attention to and aim to stimulate the development of community competence?* To answer this research question, the activities of three teacher education institutes were investigated in order to identify the intended, implemented and attained curriculum of Van den Akker (1998). Interviews with the heads of department, student teachers and teacher educators were conducted. These interviews were complemented with observations in mentor groups, subject matter groups, and reflection groups, and document analyses of study guides, portfolios and the electronic learning environment. The conclusion of this study was that the development of community competence and collaboration was seen to be important, but was not systematically included in the implemented and attained curriculum. Student teachers do not systematically learn how they can benefit from collaboration with colleagues and fellow student teachers and they do not intentionally learn how to reflect on their own community competence. Based on these results, the question was raised whether School-University Partnerships (SUPs) can stimulate the development of community competence and communities in student teachers' daily practice in school.

In chapter 3, we further elaborated on the idea of SUPs as a potential way to stimulate community development and competence. The research question of chapter

3 was: *What design principles* contribute *to the development of communities of student teachers, teachers and supervisors in a school-university partnership?* This study investigated which design principles to stimulate community development were feasible in School-University Partnerships and had an effect on community development. Based on the Learning Together model of Johnson and Johnson (1999) 14 design principles were developed and implemented in collaboration with the responsible teacher educator according to the pragmatic design paradigm (Visscher-Voerman & Gustafson, 2004). Before the project started, the educator and researcher met two times to discuss the design principles and propose activities. During the project, every meeting of the group was prepared and evaluated by the educator and researcher, in which the teacher educator was responsible for the activities, while the researcher monitored the implementation of the design principles. During the study, these design principles and accompanying activities were continuously adapted based on the feedback of the group members. The quality of community processes was measured through observations of the group members for a period of a school year. It was found that to stimulate community development in a SUP the following five design principles should be implemented:

1. Equivalent cooperation: it is emphasized that everyone is equivalent so that both student teachers and teachers can learn from each other and help each other to reach the group goals.
2. Obligation to contribute for all members: every group member is obliged to contribute to the products and goals of the group.
3. Learning to know each other: the group learns to know each other's qualities, expectations and concerns and is stimulated to take these into account.
4. Reflecting on the collaboration: group members are asked to reflect on the collaboration of the group.
5. Profiling the group as a unit: Identity interdependence is stimulated by profiling the group as a unit.

Additionally, we found that the teacher educator and the task at hand played a significant role in stimulating community development.

Based on these findings, chapter 4 and 5 further elaborated on these two aspects. In chapter 4, the importance of the course aim to stimulate community development was further studied. Design principles which seemed to be effective in the previous study were implemented and evaluated on their importance for both reflection meetings and theme meetings. In the *reflection meetings*, the student teachers exchanged experiences with each other and reflected on their professional behaviour. In the

theme meetings, the group tackled a pedagogical subject based on an assignment provided by the mentor teacher.

The research question was: Which design principles contribute to community development of student teachers in school-university partnerships in either reflection meetings or theme meetings? In this study, two communities were studied in which five design principles were implemented in co-design with the mentor teachers according to the communicative design paradigm (Visscher-Voerman & Gustafson, 2004). Community development was measured by the Community Quality Observation Protocol. The conclusion of this study was that in reflection meetings, it is important that the group members learn to know each other's' qualities, expectations and concerns (design principle learning to know each other). For the theme meetings, three design principles stimulated community development: (1) equivalent cooperation, according to which it is emphasized that everyone is equivalent so that both student teachers and teachers can learn from each other and help each other to reach the group goals, (2) goal interdependence by negotiating shared goals and defining a common goal and (3) group members are stimulated to exchange resources.

Chapter 5 focused on the role of the leader to stimulate community development. The research question was: How are transformational and transactional leadership activities related to the quality of a community in a school-university partnership? According to Harris (2004), who studied distributed leadership on the level of the school as a community, distributed leadership could be realized by transformational leadership. Transformational leaders build self-esteem, enhance professional competence and give the group members the confidence and responsibility to lead development and innovation. Transformational dimensions are idealized influence, inspirational motivation, individual consideration and intellectual stimulation. Transformational leadership and transactional leadership form two aspects of the leadership conceptualization. Four dimensions of transactional leadership are described by Pounder (2006): contingent reinforcement, active management by exception, passive management by exception and laissez-faire leadership. Leadership styles were related to the development of both communities. The extent to which the mentor teachers showed transformational or transactional behaviour was measured on a micro and macro level. The results showed that transformational leadership did not under all conditions further the development of communities of student teachers. Transformational leadership seemed to have the most effect on shared interactional repertoire. Based on this study and previous research (chapter 1, 2 en 4), it is clear that the mentor teacher plays an important role in community development in school-university partnerships, stimulating the professional development of both student teachers as mentor teachers. Mentor teachers should be aware of their activities and the reaction of the students to find a balance between stimulating distributed leadership through transfor-

mational and transactional activities. The school and university should be aware of this balance when providing guidelines for mentor teachers. More research on the development of leadership styles, taking into account both the behavioural (leadership as behaviour) and attributional (leadership as a trait) approach towards transformational and transactional leadership, will be relevant for mentor teachers.

6.2 General conclusions

The central research question in this thesis was: *How can we stimulate community development in school-university partnerships?* General conclusions can be drawn to answer this question. The first is that community development and competence are considered to be important in teacher education but are not explicitly and systematically implemented in the teacher education program in the Netherlands. A school-university partnership has the potential to stimulate community development and community competence for both student teachers and teacher educators. In designing a community in a SUP, five design principles seemed to have an effect on community development: equivalent cooperation, obligation to contribute for all members, learning to know each other, reflecting on the collaboration and profiling the group as a unit. Learning to know each other seemed to play a significant role when reflecting on experiences while equivalent cooperation, goal interdependence and exchanging of resources furthered content discussions. Finally, teacher educators should not only explicitly implement design principles, but also have to be conscious about their leading style, finding a balance between stimulating distributed leadership through transformational and transactional activities.

6.3 Reflection on conclusions

6.3.1 Community competence in teacher education

The findings of our first study showed that teacher education programs acknowledge the importance of community competence and collaboration in preparing student teachers for the profession. However, it was found that this importance was not translated into the implemented and attained curriculum although student teachers were seated in four types of groups in which there was ample opportunity to collaborate with each other. Using a portfolio, student teachers also had the opportunity to reflect on these collaborative activities. Our study disclosed a contradiction between the intended curriculum on the one hand and the implemented and attained curriculum on

the other hand. This contradiction could be due to the fact that the Dutch government prescribes the competence standards for teachers, one of which is the 'interpersonal competence for collaborating with colleagues', but, at the same time, leaves much freedom for teacher education institutes how to include each of the prescribed competences in their programmes (Swennen, Volman, & Van Essen, 2008) and, accordingly, how to measure the extent in which student teachers have gained these competences. From the student teacher perspective, it was found difficult to reflect on their community competences in the portfolio; possibly because they saw the collaboration with their co-students at the teacher education institute not as a goal, but as a means to fulfil assignments. Also their position in the school, in case of the student teacher within an internship, can inhibit them to collaborate on a colleague level.

6.3.2 SUPs as community of practice

In this thesis we used the perspective of Community of Practice (CoP) of Wenger (1998) as a basis for determining whether and to what degree a group formed a community in a SUP. The three elements of Wenger's (1998) concept of the community of practice, mutual engagement, shared repertoire and joint enterprise, are combined with descriptions of communities by Bellah, Madsen, Sullivan, Swidler, and Tipton (1985) and Grossman, Wineburg, and Woolworth (2001) into the community model of Admiraal, Lockhorst, and Van der Pol (2012). This community model with specific indicators and markers was useful for determining the quality of community processes in the school-university partnerships in chapters 3, 4 and 5, although the communities in these SUPs differ somewhat from the original definition of a CoP. The communities in these CoPs exist for a relatively short, and predefined period of time. Additionally, some SUPs have mainly the goal of learning instead of working together and creating meaningful practice. However, we used the concept of a CoP as a perspective to study the development of a group, because these SUPs are located in the workplace and had a developmental philosophy rather than an educational. We recommend future research to use multiple perspectives such as a team learning or networked learning perspective to fully understand the development of these groups in SUPs.

6.3.3 Design-based research

In chapter 3 and 4, design principles were developed to stimulate community development in collaboration with the mentor teachers according to a pragmatic (by interactive and iterative try-out and revision) and consensus focused communicative design paradigm respectively (Visscher-Voerman & Gustafson, 2004). These paradigms seemed to be useful in developing and implementing design principles and corre-

sponding activities. In chapter 3, in which the study into community development was of a more explorative nature, a pragmatic approach was more useful through constantly adapting the design principles to the current situation. In chapter 4, a communicative design was more appropriate because the starting point of the design principles had already been made.

In chapter 3, it was found that five design principles were feasible and effective in stimulating community development: *equivalent cooperation* (emphasizing equivalence of group members), *obligation to contribute for all members* (urging all group members to contribute), *learning to know each other* (stimulating group members to become acquainted), *reflecting on the collaboration* (fostering reflection on the group as identity) and *profiling the group as a unit* (stimulating group identity). In chapter 4, the same effect was found for two of these design principles: *equivalent cooperation* for theme meetings and *learning to know each other* for reflection meetings. Additionally, design principles of stimulating goal interdependence and exchanging resources were found to be effective for theme meetings. Although we studied the design principles in chapter 4 on a micro level, determining the presence of the design principles and the community quality in each meeting separately, results were consistent with chapter 3. However, some effects are believed to last longer than the meetings studied. Future research is recommended to study the short- and lasting effects of the implementation of design principles. That way, the conditions and mechanisms underlying the effects can be further investigated.

6.3.4 Leadership

Chapter 5 focused on the effect of transformational and transactional leadership activities on community development. It was assumed that transformational leadership activities through distributed leadership would stimulate community development. The results showed an effect on the dimension of *shared interactional repertoire*. However, in this group a conflict between one student teacher and the rest of the group occurred. The effect of this conflict lasted until the last meeting. An explanation for this fact could be that the transformational teacher granted more responsibility to the group and allowed the student teachers to fill in the meetings such that more personal input was possible. The mentor teacher seemed not to be able to bend this conflict by her activities. In addition, we found that the transformational leader was concerned with the needs of the student teachers and the context in which this community existed. Future research should take into account the possibility that transformational leadership could be a balance between traits and behaviour, dependent on the context and the duration of the community.

6.4 Reflection on methods: limitations and suggestions for further research

The studies within this thesis mostly used qualitative methods and analysis. In chapter 3, 4 and 5, community quality was measured through observations of the different communities. Based on the community model of Admiraal, Lockhorst, & Van der Pol (2012), a *Level of Community Development Observation Protocol* was developed and used to analyse community quality. Although the different dimensions, indicators and markers provided a good understanding of the community quality, some remarks can be made. For example, in Chapter 3 we found that some indicators seemed to be related to each other. Additionally, the behaviour of the group was categorized frequently in the moderate phase of community development. The question remains whether the three markers of community quality (*limited, moderate, strong*) adequately distinguish between various quality levels of communities, when the *limited* marker represents mainly an absence of the indicator while the *strong* marker represents a full presence of the indicator. Future research is needed to further perfecting the observation protocol.

In chapter 5 also the *Leadership Style Observation Protocol* was developed, based on the *Multifactor Leadership Questionnaire* (Bass & Avolio, 1990). This protocol provided valuable insights into observable aspects of transformational and transactional leadership. Until now, transformational leadership is mainly investigated by questionnaires focusing on the perceptions of both 'leaders' and 'followers'. However, to fully grasp the concept of transformational leadership, it is important to know what those leaders concretely do in their daily practice. In chapter 5, leadership was measured on a micro and macro level. These two levels complemented each other in determining which leadership activities a leader performs. We also found that the transformational leadership acts on macro level could not be categorized in the four aspects of transformational leadership according to Bass and Avolio (1990). Additionally, some leadership acts could not be defined as either transformational or transactional. Future research is recommended to further investigate these issues and elaborate on the measurement instruments.

As said before, the studies in this thesis mainly used qualitative methods to reach a deep understanding of the processes in communities in SUPs. This also means that only a small amount of data could be gathered. In the first study, three teacher education institutes were studied, in the second study one community in a SUP and in the third study two communities within four SUPs. In all cases, only a restricted number of group meetings could be analysed by applying the *Community Development* and *Leadership Style Observation Protocols.* The mentor teachers were rather inexperienced when applying the design principles for which they received only a short instruction at the beginning of the series of group meetings. Also the students were beginning stu-

dent teachers, in the first or second year of their four year teacher education programme. The small sample size and small number of analysed events are also inherent to design-based research, in which the implementation and evaluation of design principles is very time-consuming. As a follow-up to this study, further interactive and iterative cycles of improving design principles for teacher community development should be initiated in order to improve the quality of the interventions and observation protocols. Future research should show to what extent these findings were also generalizable to all SUPs in Dutch secondary education.

A last caveat pertains to the logic of our conclusions. On the basis of a certain amount of progress in community development we have drawn conclusions about the effectiveness of design principles. However, in the rich environment of a School-University Partnership it is difficult to rule out alternative explanations for the occurrence of community development. By the same token, it is difficult to ascribe the nonexistence of signs of community development to the nonexistence or ineffectivity of implemented design principles. So, our conclusions should considered as indications of potential influence of design principles on the development of student teachers communities in reflection or theme meetings with teacher mentors adopting transformational and transactional leadership styles.

6.5 Practical implications

In chapter 2 we found that community competence and development in the teacher education institute were found important but were not operationalized in the implemented and attained curriculum. More attention should be paid to the social aspect of teaching, both by teacher education institutes as by the individual mentor teachers.

Also in school-university partnerships, mentor teachers should be aware of the fact that these communities do not only have the goal to educate student teachers or to professionalize teachers and mentor teachers. The collaboration process of the community is important for both the functioning of the group, as to educate student teachers how to participate in such communities as an involved colleague. Targeted design principles and interventions to stimulate community building and community competence in such partnerships are believed to help the mentor teachers with this goal.

Additionally, the mentor teacher should be aware of her role in the school-university partnerships. Because the SUPs are mainly part of the teacher education program, student teachers mainly see these mentor teachers as the leaders, experts, and judges. This hierarchical position is not always the most interesting position for the development of a community. Equivalent cooperation plays a significant role in com-

munity development, without undermining the position mentor teachers receive from schools or teacher education institutes. Being aware of the role mentor teachers play and adapting leadership activities towards the needs of the student teachers and context of the SUP combined with professional development of mentor teachers might help develop community building.

Finally, as the implementation of SUPs varies significantly in goals, structures and tasks, the teacher education institute and mentor teachers should be aware of the aims and tasks of those communities. When the focus of these SUPs is more on the content of the teaching profession, other activities can be performed than when the focus is on exchanging experiences.

6.6 Theoretical implications

Considering the theoretical implications of this study into fostering community development in School-University Partnerships two questions should be considered: (1) to what extent has our understanding of the concept of community development and School-University Partnerships been enriched, refined or restructured, and (2) which instruments have been developed to measure processes of community development in School-University Partnerships?

The concept of professional community of teachers has been analysed by applying the framework of Admiraal, Lockhorst and Van der Pol (2012) in which three dimensions of communities have been distinguished: (1) group identity, (2) shared domain, and (3) shared interactional repertoire. In chapter 3 we were able to identify five design principles which contributed to the development of communities of student teachers (see 6.1). In chapter 4, we further elaborated on the effect of these design principles on the development of communities of student teachers in theme meetings and reflection meetings. In chapter 5, we related community development to the impact of transformational and transactional leadership styles. In this way we were able to embed the concept of community development into the framework of the pedagogy of teacher education in which the development of community competences of student teachers is related to the leadership style of the mentor teacher and to the assignments on which the group is working.

Firstly, in reflection meetings, group identity development benefits from learning to know each other, while in theme meetings, group identity is stimulated by equivalent cooperation. Moreover, in chapter 5 it was shown that transformational leadership does not strengthen the group identity when a conflict arises and the leader is not able to help the group to solve its problems.

Secondly, developing a shared domain is supported by stimulating the group to negotiate shared goals and exchange resources in theme meetings. Both a transactional and a transformational leadership style are conducive to the development of a shared domain.

Thirdly, the group's shared interactional repertoire is positively influenced by equivalent cooperation in theme meetings. The transformational leadership creates a fertile soil for the development of the group's shared interactional repertoire.

Apart from enriching the concept of community development this study also produced two instruments for studying the development of communities of student teachers: a *Community Quality Observation Protocol* and a *Leadership Style Observation Protocol.* These protocols are to be considered as a first step towards analysing community development and leadership styles on the basis of real-time observations. The reliability of the protocols can be further enhanced by improving the quality of the coding scheme through prolonged experience with the protocols. Notwithstanding this, the protocols already proved to be useful to arrive at evidence-based conclusions on factors influencing community development, particularly leadership styles.

6.7 Epilogue

Studying the development of student teacher communities in School-University Partnerships has been a complex but worthwhile effort to contribute to our knowledge and practice of educating teachers to become competent professionals. Complex because of the fact that the development of student teacher communities is a situated phenomenon on which the type of group activities and the leadership style of the mentor teacher have a distinctive impact. Worthwhile because we were able to enrich our theoretical and practical understanding of the way communities of student teachers develop. Bearing in mind the limitations of this study, the conclusion is warranted that under appropriate conditions of leadership and group assignments School-University Partnerships help student teachers to become professionals in community competence.

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Summary

This thesis aimed to explore ways to stimulate community development in school-university partnerships in teacher education. The four studies in this thesis provided insights in the way student teachers collaborate and insights in ways to foster community development in SUPs. The general research question was: *How can we stimulate community development in school-university partnerships?*

Chapter 1 gives an overview of the background of this research, the theoretical framework and the set-up of this thesis. Teacher communities are often mentioned as fruitful collaborative contexts as they provide an ongoing venue for teacher learning to improve professional practice, collective capacity and continuing intellectual development (Grossman, Wineburg, & Woolworth, 2001; Little 2003; Hammerness, Darling-Hammond, & Bransford 2005). Many advantages of these communities are described; faculty collaboration, student learning, organizational performance and organizational innovation all benefit from the community concept in schools (Mullen & Schunk, 2010). A community is seen to foster collaboration and lifelong learning among teachers to stimulate school improvement through organizational and cultural change (Matthews, Crow, & Matthews, 2009). To be able to participate in a teacher community, teachers need to have a certain level of community competence to collaborate with their colleagues. Therefore, pre-service and in-service teacher education has a challenging role in stimulating student teachers to develop community competence. However, teacher education institutes pay little attention to the development of community competence. Student teachers do not prefer to collaborate during their learning process and collaborative learning is only implemented once in a while in teacher education (Ruys, Van Keer & Aelterman, 2010). Another recent development in teacher education is the movement towards linking teacher education to (professional development) schools in several countries. School-university partnerships focus on both the education of student teachers and the professional development of teachers (Castle, Fox & O'Hanlan Souder, 2006; Ridley, Hurwitz, Hackett & Miller, 2005). In these school-university partnerships student teachers develop their community competence simultaneously in theory (the teacher education institute) and in practice (the teacher community in the school). This complicates the concept of community development and community competences when student teachers are believed to need certain competences to participate in such a community and at the same time improve their community competences by participating in that community. Based on the concept of

communities of practice (Lave & Wenger, 1991) a professional community of teachers is defined by Admiraal, Lockhorst and Van der Pol (2012) as a group of teachers who are socially interdependent, who participate together in discussion and decision making, and share and build knowledge. These activities are characterized in the community model of Admiraal, Lockhorst and Van der Pol (2012, Table 3) by three dimensions:

- *group identity* is defined as the mutual engagement that binds teachers together in a social entity;
- *shared domain* is defined as a joint enterprise as understood and continually negotiated by its members;
- *shared interactional repertoire* is characterized by a shared practice and beliefs on how teachers in a group interact.

Chapter 2 reports on a study an overview of the state-of-the-art of the preparation of student teachers to participate in communities of secondary school teachers. The research question of this study, as reported in chapter 2 was: *To what extent do the teacher education curricula in three teacher education institutes in the Netherlands pay attention to and aim to stimulate the development of community competence?* To answer this research question, the activities of three teacher education institutes were investigated in order to identify the intended, implemented and attained curriculum of van den Akker (1998). Interviews with the heads of department, student teachers and teacher educators were conducted. These interviews were complemented with observations in mentor groups, subject matter groups, and reflection groups, and document analyses of study guides, portfolios and the electronic learning environment. The conclusion of this study was that the development of community competence and collaboration was seen to be important, but was not systematically included in the implemented and attained curriculum. Student teachers do not systematically learn how they can benefit from collaboration with colleagues and fellow student teachers and they do not intentionally learn how to reflect on their own community competence. Based on these results, the question was raised whether School-University Partnerships (SUPs) can stimulate the development of community competence and communities in student teachers' daily practice in school.

Chapter 3 reports on the development and implementation of design principles to stimulate community development and competence. The research question of chapter 3 was: *What design principles* contribute *to the development of communities of student teachers, teachers and supervisors in a school-university partnership?* This study investigated which design principles to stimulate community development were feasible in School-University Partnerships and had an effect on community development. Based on the Learning Together model of Johnson and Johnson (1999) 14 design prin-

ciples were developed and implemented in collaboration with the responsible teacher educator according to the pragmatic design paradigm (Visscher-Voerman & Gustafson, 2004). Before the project started, the educator and researcher met two times to discuss the design principles and propose activities. During the project, every meeting of the group was prepared and evaluated by the educator and researcher, in which the teacher educator was responsible for the activities, while the researcher monitored the implementation of the design principles. During the study, these design principles and accompanying activities were continuously adapted based on the feedback of the group members. The quality of community processes was measured through observations of the group members for a period of a school year. It was found that to stimulate community development in a SUP the following five design principles should be implemented:

1. *Equivalent cooperation*: it is emphasized that everyone is equivalent so that both student teachers and teachers can learn from each other and help each other to reach the group goals.
2. *Obligation to contribute for all members*: every group member is obliged to contribute to the products and goals of the group.
3. *Learning to know each other*: the group learns to know each other's qualities, expectations and concerns and is stimulated to take these into account.
4. *Reflecting on the collaboration*: group members are asked to reflect on the collaboration of the group.
5. *Profiling the group as a unit*: Identity interdependence is stimulated by profiling the group as a unit.

Additionally, we found that the teacher educator and the task at hand played a significant role in stimulating community development.

Chapter 4 focused on the importance of the course aim to stimulate community development. The research question was: Which design principles contribute to community development of student teachers in school-university partnerships in either reflection meetings or theme meetings? Design principles which seemed to be effective in the previous study were implemented and evaluated on their importance for both reflection meetings and theme meetings. In the reflection meetings, the student teachers exchanged experiences with each other and reflected on their professional behaviour. In the theme meetings, the group tackled a pedagogical subject based on an assignment provided by the mentor teacher.

In this study, two communities were studied in which five design principles were implemented in co-design with the mentor teachers according to the communicative

design paradigm (Visscher-Voerman & Gustafson, 2004). Community development was measured by the *Community Quality Observation Protocol*. The conclusion of this study was that in reflection meetings, it is important that the group members learn to know each other's' qualities, expectations and concerns (design principle *learning to know each other*).

For the theme meetings, three design principles stimulated community development: (1) *equivalent cooperation*, according to which it is emphasized that everyone is equivalent so that both student teachers and teachers can learn from each other and help each other to reach the group goals, (2) *goal interdependence* by negotiating shared goals and defining a common goal and (3) *group members are stimulated to exchange resources.*

Chapter 5 focused on the role of the leader to stimulate community development. The research question was: How are transformational and transactional leadership activities related to the quality of a community in a school-university partnership? According to Harris (2004), who studied distributed leadership on the level of the school as a community, distributed leadership could be realized by transformational leadership. Transformational leaders build self-esteem, enhance professional competence and give the group members the confidence and responsibility to lead development and innovation. Transformational dimensions are idealized influence, inspirational motivation, individual consideration and intellectual stimulation. Transformational leadership and transactional leadership form two aspects of the leadership conceptualization. Four dimensions of transactional leadership are described by Pounder (2006): contingent reinforcement, active management by exception, passive management by exception and laissez-faire leadership. Leadership styles were related to the development of both types of communities. The extent to which the mentor teachers showed transformational or transactional behaviour was measured on a micro and macro level. The results showed that transformational leadership did not under all conditions further the development of communities of student teachers. Transformational leadership seemed to have the most effect on shared interactional repertoire.

Based on the results of the four empirical studies, in **Chapter 6** conclusions are drawn, and limitations and implications are discussed. The first conclusion is that community development and competence are considered to be important in teacher education but are not explicitly and systematically implemented in the teacher education programs in the Netherlands. A school-university partnership (SUP) has the potential to stimulate community development and community competence for both student teachers and teacher educators.

In designing a community in a SUP, five design principles seemed to have an effect on community development: equivalent cooperation, obligation to contribute for all members, learning to know each other, reflecting on the collaboration and profiling the group as a unit. Learning to know each other seemed to play a significant role when reflecting on experiences while equivalent cooperation and exchanging of resources furthered content discussions. Finally, teacher educators should not only explicitly implement design principles, but also have to be conscious about their leading style, finding a balance between stimulating distributed leadership through transformational and transactional activities.

Limitations of this research are the small scale nature of this research. The studies in this thesis mainly used qualitative methods to reach a deep understanding of the processes in communities in SUPs. This also means that only a small amount of data could be gathered. Additionally, some remarks are made about the *Level of Community Development Observation Protocol* and the *Leadership Style Observation Protocol* which were developed during this research. In relation to these limitations, directions for future research have been determined.

Samenvatting

Dit proefschrift onderzocht manieren om community ontwikkeling in opleidingsscholen te stimuleren. De vier studies leverden inzichten op in de manier waarop docenten-in-opleiding (dio's) samenwerken en hoe we community ontwikkeling kunnen stimuleren in opleidingsscholen. De algemene onderzoeksvraag van dit proefschrift luidde: "Hoe kunnen we community ontwikkeling stimuleren in opleidingsscholen?"

Hoofdstuk 1 geeft een overzicht over de achtergrond van dit onderzoek, het theoretische raamwerk en de opzet van dit proefschrift. Docent communities worden vaak beschouwd als een context waarin er samengewerkt kan worden aan de beroepspraktijk. (Grossman, Wineburg, en Woolwort, 2001; Little, 2003; Hammerness, Darling-Hammond & Bransford, 2005). Er is veel geschreven over de voordelen van deze communities, zoals samenwerking van docenten, het leren van studenten, organisatorische opbrengsten en onderwijsinnovaties (Mullen & Schunk, 2010). Een community wordt beschouwd als een manier om de samenwerking en levenslang leren van docenten te stimuleren, en om de schoolorganisatie te verbeteren door middel van organisatorische en culturele veranderingen (Mat-thews, Crow, & Matthews, 2009). Om te kunnen participeren in een docent community, moeten de docenten een bepaald niveau van community competenties hebben om goed te kunnen samenwerken. De lerarenopleiding zou hierin een stimulerende rol kunnen spelen. De lerarenopleidingen besteden echter weinig aandacht aan de ontwikkeling van community competenties. Docenten-in-opleiding (dio's) werken liever niet samen tijdens hun leerproces en samenwerkend leren wordt slechts zelden geïmplementeerd in de lerarenopleiding (Ruys, Van Keer & Aelterman, 2010).

Een andere recente ontwikkeling in de lerarenopleiding is de verschuiving van de lerarenopleiding naar de scholen. Opleidingsscholen richten zich op zowel de opleiding van dio's als de professionele ontwikkeling van leraren (Castle, Fox & O'Hanlan Souder, 2006; Ridley, Hurwitz, Hackett & Miller, 2005). In deze opleidingsscholen wordt van dio's verwacht dat zij de nodige competenties hebben om te kunnen functioneren in de school community, terwijl ze tegelijkertijd worden gestimuleerd deze community competenties aan te leren. Gebaseerd op het concept van communities of practice (Lave & Wenger, 1991) wordt in dit proefschrift de definitie van Admiraal, Lockhorst en Van der Pol (2012) gebruikt: een docent community is een groep docenten die sociaal afhankelijk zijn, die samen discussiëren en beslissingen nemen, en kennis delen en

ontwikkelen. Het model van Admiraal, Lockhorst en Van der Pol (2012, tabel 3) wordt gekenmerkt door drie dimensies:

- Groepsidentiteit
- Gedeeld domein
- Gedeeld interactioneel repertoire

In **hoofdstuk 2** wordt verslag gedaan over de huidige stand van zaken wat betreft het voorbereiden van dio's op het participeren in communities. De onderzoeksvraag van deze studie was: *In welke mate wordt door drie lerarenopleidingen aandacht besteed aan de ontwikkeling van community competenties?* Om een antwoord te vinden op deze vraag zijn de activiteiten van drie lerarenopleidingen bestudeerd op drie niveaus: het geplande, toegepaste en bereikte niveau (van den Akker, 1998). Hierbij zijn de afdelingshoofden, lerarenopleiders en dio's geïnterviewd. Daarnaast zijn mentorgroepen, vakdidactiekgroepen, reflectiegroepen en onderzoeksgroepen geobserveerd en studiegidsen, portfolios en de elektronische leeromgevingen geanalyseerd. Uit deze studie bleek dat de ontwikkeling van community competenties en samenwerking wel gezien werd als belangrijk, maar niet systematisch geïmplementeerd werd op het toegepaste en bereikte niveau. Gebaseerd op deze resultaten is het de vraag of opleidingsscholen wel de ontwikkeling van community competenties en communities in de praktijk kunnen stimuleren.

In **hoofdstuk 3** wordt gerapporteerd over de ontwikkeling en implementatie van design principes om community ontwikkeling en competentie te stimuleren. De onderzoeksvraag van dit hoofdstuk was: *welke design principes dragen bij aan de ontwikkeling van communities van dio's, docenten en mentoren in een opleidingsschool?* Deze studie onderzocht welke design principes uitvoerbaar waren en welke een effect hadden op community ontwikkeling. Op basis van het Learning Together model van Johnson en Johnson (1999) zijn 14 design principes ontwikkeld en geïmplementeerd in samenwerking met de mentor volgens het pragmatisch design paradigma (Visscher-Voerman & Gustafson, 2004). Vooraleer het project startte, werden de design principes door de onderzoeker en de mentor bediscussieerd en werden activiteiten ontworpen. Tijdens het project werd elke bijeenkomst door de onderzoeker en de mentor voorbereid en geëvalueerd. In deze samenwerking was de mentor verantwoordelijk voor de activiteiten, terwijl de onderzoeker overzicht hield op de design principes. Doorheen het proces werden de design principes en bijbehorende activiteiten continue aangepast op basis van de feedback van de groepsleden. Gedurende een jaar werden observaties van de bijeenkomsten gebruikt om de kwaliteit van de community

processen te bepalen. De resultaten geven aan dat de volgende vijf design principes effectief waren in de ontwikkeling van communities:

1. *Gelijkwaardige samenwerking*: Iedereen is gelijkwaardig aan elkaar zodat zowel docenten als dio's van elkaar kunnen leren en elkaar kunnen helpen de groepsdoelen te bereiken
2. *Verplichting om bij te dragen*: elk groepslid is verplicht om bij te dragen aan de producten en doelen van de groep
3. *Elkaar leren kennen*: de groep leert elkaar kennen, met ieders sterke punten, verwachtingen en behoeften en wordt gestimuleerd om hiermee rekening te houden.
4. *Reflectie op de samenwerking*: groepsleden wordt gevraagd om te reflecteren op de samenwerking in de groep
5. *De groep als een eenheid profileren*: betrokkenheid op de groepsidentiteit wordt gestimuleerd door de groep als een eenheid te profileren

Daarnaast bleek de mentor en de taak van de groep een belangrijke rol te spelen in het stimuleren van community ontwikkeling.

In **hoofdstuk 4** lag de focus op het belang van cursusdoelen gericht op het stimuleren van community ontwikkeling. De onderzoeksvraag was: *Welke design principes dragen bij aan de community ontwikkeling van docenten en dio's in opleidingsscholen in reflectiebijeenkomsten en themabijeenkomsten?* Design principes uit het vorige hoofdstuk zijn in deze studie geïmplementeerd en geëvalueerd op hun belang voor reflectiebijeenkomsten en themabijeenkomsten. In de reflectiebijeenkomsten wisselden de dio's ervaringen uit en reflecteerden ze op hun professioneel gedrag. In de themabijeenkomsten behandelde de groep een pedagogisch onderwerp gebaseerd op een opdracht van de mentor.

In dit onderzoek werden twee communities bestudeerd waarin vijf design principes geïmplementeerd werden in samenwerking met de mentoren, gebaseerd op het communicatieve design paradigma (Visscher-Voerman & Gustafson, 2004). Community ontwikkeling werd gemeten met behulp van het *Community Quality Observation Protocol.* De conclusie van dit onderzoek was dat in reflectiebijeenkomsten het belangrijk is dat de groep elkaar leert kennen. Voor de themabijeenkomsten stimuleerden drie design principes community ontwikkeling: (1) gelijkwaardige samenwerking, (2) doelafhankelijkheid door het bepalen van een gemeenschappelijk doel, en (3) groepsleden worden gestimuleerd om bronnen te delen.

In **hoofdstuk 5** werd de rol van de mentor onderzocht om community ontwikkeling te stimuleren. De onderzoeksvraag was: *Op welke manier zijn transformationele en transactionele leiderschapsactiviteiten gerelateerd aan de kwaliteit van een community in een opleidingsschool?* Volgens Harris (2004) die gespreid leiderschap onderzocht op het niveau van de school als een community, kan gespreid leiderschap gerealiseerd worden door transformationeel leiderschap. Transformationele leiders geven zelfvertrouwen, verbeteren professionele competenties en geven de groepsleden het vertrouwen en de verantwoordelijkheid om ontwikkeling en innovatie te leiden. Transformationele dimensies zijn inspiratie, motivatie, betrokkenheid en stimuleren tot nadenken. Transformationeel leiderschap en transactioneel leiderschap zijn twee aspecten van leiderschap. Transactioneel leiderschap wordt door Pounder (2006) beschreven in vier dimensies: contingente beloning, actief management by exception, passive management by exception en laissez-faire leiderschap. Leiderschapsactiviteiten werden gerelateerd aan de ontwikkeling van beide communities. The mate waarin de mentoren transformationele of transactionele activiteiten vertoonden werden zowel op macroniveau als op microniveau gemeten. De resultaten tonen aan dat transformationeel leiderschap niet altijd de ontwikkeling van communities stimuleert. Transformationeel leiderschap leek het meeste effect te hebben op het gedeeld interactioneel repertoire.

Gebaseerd op de resultaten van deze vier empirische studies, geeft **hoofdstuk 6** de hoofdconclusies weer, en worden beperkingen en implicaties bediscussieerd. De eerste conclusie is dat community ontwikkeling en community competentie wel als belangrijk gezien worden in de lerarenopleiding maar niet systematisch of expliciet geïmplementeerd zijn in de lerarenopleidingen. Een opleidingsschool heeft de potentie om community ontwikkeling en community competentie te stimuleren voor zowel docenten-in-opleiding als lerarenopleiders.

In de ontwikkeling van een community in een opleidingsschool, bleken vijf design principes een effect te hebben op community ontwikkeling: gelijkwaardige samenwerking, verplichte bijdrage, elkaar leren kennen, reflecteren op de samenwerking, en het profileren van de groep als een eenheid. Elkaar leren kennen bleek een significante rol te spelen bij het reflecteren op ervaringen terwijl gelijkwaardige communicatie en het delen van bronnen inhoudsdiscussies stimuleerden.

Lerarenopleiders en mentoren zouden zich bewust moeten zijn van hun leiderschapsstijl zodat ze een balans kunnen vinden tussen transformationele en transactionele activiteiten om gespreid leiderschap te stimuleren.

Beperkingen van deze studie liggen vooral bij kleine schaalgrootte van dit onderzoek. In de studies in dit proefschrift werden vooral kwalitatieve methoden gebruikt om een diep begrip te krijgen van de processen in de communities. Dit betekent echter

ook dat er slechts een beperkte hoeveelheid data verzameld kon worden. Daarnaast zijn er ook enkele opmerkingen geplaatst over de *Level of Community Development Observation Protocol* en de *Leadership Style Observation Protocol.* In relatie tot deze beperkingen worden er suggesties gedaan voor verder onderzoek.

Publications

Scientific Publications

Vandyck, I., Graaff, R. de, Pilot, A. & Beishuizen, J.J. (2012). Community building of (student) teachers and a teacher educator in a school-university partnership. *Learning Environments Research, 15 (3),* 299-318.

Dobber, M., Vandyck, I., Akkerman, S., Graaff, R. de, Beishuizen, J.J., Pilot, A., Verloop, N., & Vermunt, J.D.H.M. (2012). The development of community competence in the teacher education curriculum. *European Journal of Teacher Education. DOI:10.1080/02619768.2012.718326*

Other Publications

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Vandyck, I., Brok, P. J. den, Beishuizen, J., & Pilot, A. (2007). Samenwerken(d leren) van docenten in de duale lerarenopleiding [Collaborative learning of student teachers in the inservice teacher education]. Paper presented at the Onderwijs Research Dagen (ORD), Groningen, The Netherlands.

Brouwer, P., Dobber, M., Vandyck, I. & Akkerman, S. (2008). Creatief met concepten. De relaties tussen communities, samenwerking en sociale competenties [Creative with concepts: The relationships between communities, collaboration and social

competence]. Presented at the Onderwijs Research Dagen (ORD), Eindhoven, The Netherlands.

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Dobber, M., Vandyck. I., Akkerman, S., Graaff, R. de, Beishuizen, J.J., Pilot, A., Verloop, N., Vermunt, J.D.H.M. (2009). *The Development of cooperation and social competence in teacher education.* Paper presented at the 2009 Annual meeting of the American Educational Research Association, San Diego, CA.

Vandyck, I., Graaff, R. de, Pilot, A., & Beishuizen, J. (2010). *Design Principles to Stimulate Collaborative Learning in Communities of Teachers in School-Institute Partnerships.* Paper presented at the 2010 Annual meeting of the American Educational Research Association, Denver, CO.

Vandyck, I., Graaff, R. de, Pilot, A, & Beishuizen, J. (2010). Community Development of (Student) Teachers in School-Institute Partnerships. Roundtable at the 2010 Annual meeting of the American Educational Research Association, Denver, CO.

Admiraal, W., Brouwer, P., Dobber, M., Lockhorst, D., & Vandyck, I. (2011). *Collaborative cultures in education: sense of community of teacher and student teachers.* Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA.

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Curriculum Vitae

Inne Vandyck was born in 1981 in Tongeren, Belgium. After completing secondary education in 1999, she studied Psychology at Maastricht University. In 2004, she graduated with a master's degree in Educational Psychology. After working for two years at the Ruud de Moor centre as an educational researcher, Inne started her PhD-project in 2006 at the Onderwijscentrum of VU University in Amsterdam. Her research focused on community development of (student) teachers in school-university partnerships. The PhD-project was part of a collaborative project on the development of communities of (student) teachers in different working and learning contexts. She presented her research at both national (ORD) as well as international conferences (EARLI, JURE, and AERA). Also, as part of her PhD-education, she followed master classes on educational design and curriculum development, qualitative analysis, and teaching and teacher education. As of 2011, Inne works as an assistant professor at LOOK – Scientific Centre for Teacher Research at the Open University, the Netherlands, where she combines her interests in teacher professional development, teacher communities and networked learning.